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STREET AND HIGHWAY PLAN FOR THE JOLIET AREA

1956

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A STREET AND HIGHWAY PLAN

for the

JOLIET AREA

PREPARED FOR

THE STATE OF ILLINOIS

DEPARTMENT OF PUBLIC WORKS AND BUILDINGS

DIVISION OF HIGHWAYS

IN COOPERATION WITH THE

UNITED STATES DEPARTMENT OF COMMERCE

BUREAU OF PUBLIC ROADS

BY

H. W. LOCHNER & COMPANY

CHICAGO, ILLINOIS

MAY, 1956

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July 1, 1956

Mr. E. A. Rosenstone, Director
Department of Public Works and Buildings
Division of Highways
Springfield, Illinois

Dear Mr. Rosenstone:

It is with pleasure that we submit herewith a Street and Highway Plan for the Joliet urban area, prepared in accordance with your directions of February 8, 1955.

The plan as presented herein has as its factual foundation the origin and destination and other traffic data gathered in 1953 by the Illinois Division of Highways, together with supplemental data obtained during the conduct of our studies.

The plan calls for a program for the progressive development of a street and highway system capable of accommodating vehicular traffic in the Joliet area for the coming twenty years. It is an ambitious program, but one which we believe can be translated from the plan stage into physical reality through the cooperative efforts of the City of Joliet, Will County and the State of Illinois.

We are pleased to acknowledge the cooperation accorded us in the development of this plan by the several agencies involved, and particularly the Illinois Division of Highways. To these agencies and to other individuals from whom we have received assistance, we wish to express our sincere appreciation.

Very truly yours,

Harry W. Lochner

H. W. LOCHNER & COMPANY

Summary of the Report

This report presents an analysis of the street and highway needs of the Joliet area through the year 1975, and the recommendation of a plan of action through which those needs may be met. The area embraced in the study included corporate Joliet plus one mile in all directions.

The factual basis for the analysis and plan was the traffic data collected in 1953 by the Illinois Division of Highways, and supplementary information to bring the 1953 data up-to-date.

To permit the planning and programming of street and highway improvements of lasting value, estimates were made of traffic conditions as these might obtain in 1975. Since the growth of traffic will depend upon where people will live, work and conduct business, studies were made of a logical land development pattern for the coming twenty years. Principal findings of the population and land use studies were that the Joliet area's population will expand almost thirty-five percent, with most of the residential growth taking place to the west of the area now occupied. Industrial expansion will continue on the east side of the river to some degree, but the large bulk of it will almost surely be developed to the southwest along the river and Channahon Road. The existing central business district will continue to be the principal focus of Joliet's traffic pattern, providing that the parking problem is more fully solved and that the downtown area can be relieved of traffic having no business there.

External traffic, that operating on the highways and roads surrounding Joliet, will increase volumetrically at rates varying between forty and seventy percent, with the largest increase on U.S. Route 6 as it extends to the southwest of the city.

The existing street and highway system, weighed against anticipated twenty-year requirements, indicated the need for several essential street and highway improvements.

Joliet's most serious traffic problem is found within and adjacent to its central business district. At the present time half of the traffic entering that area has no business there. To remedy this, a system of circumferential routes, consisting of one-way couples, is recommended. The east couple would be developed along Eastern Avenue and Richards and Herkimer Streets; the west couple along Broadway and Hickory Street; and the north couple along Ohio and Jackson Streets. To complete the encirclement on the south, 5th Avenue would be directionally connected to an expressway running east-west and across the river via a new high level bridge, with directional connections to the west couple and McDonough Street.

The operation of the five central bridges were studied in detail, as was the practicability of conversion to high level fixed structures. It was found that a high level bridge at Ruby Street would be impracticable; at McDonough Street, unnecessary; and at Bridge, Cass and Jefferson Streets, practicable but very costly. It was determined that a well balanced program might include one central area bridge at high level, and Bridge Street is recommended as the most logical location.

To accommodate anticipated river crossing traffic and to connect the one-way couples around the business center, a new high level bridge, with expressway connections, is recommended for development south of McDonough Street. West of the river, McDonough would be expanded as an approach to this bridge.

It was found that Joliet is inadequately connected to Channahon Road and two high-type connections are recommended, one at Brandon Road and a second at Larkin Avenue extended.

Plainfield Road, the principal artery connecting the northwest sections of Joliet and the central area, is recommended for widening between the west urban limits and Western Avenue.

As a relief artery to busy Chicago Street south of the central area, it is recommended that Doris Avenue and Gardner Street be redeveloped as major urban thoroughfares.

To the east of the business district it is recommended that the currently narrow section of Cass Street be expanded as a modern four-lane pavement.

To accommodate the twenty year anticipated volume of traffic, Washington Street is recommended for expansion to four lane width between Eastern Avenue and the east urban limits.

It was found that a reconstruction of the Jackson Street overcrossing of the E. J. and E. tracks at expanded width, while desirable, would be too costly for inclusion in a realistic program based on limited funds.

The improvements necessary and recommended to attain a trafficway system adequate for present and 1975 requirements are set forth in the body of the report. The recommended construction projects are set forth in two programs, one covering Major Construction and the other, Street Widenings. Within these programs a specific order of development has been recommended.

The report sets forth recommendations for the application of U. S. and State Route markings to the improved system. Also included are suggestions and recommendations concerning the responsibilities of the several road building agencies in carrying out the plan.

A Street and Highway Plan for the Joliet Urban Area

Purpose of Report

The purpose of this engineering report is the analysis of the existing and foreseeable future street and highway needs for the Joliet urban area, and the development of an integrated and improved system of traffic carriers through which those needs can be satisfied.

In an urban area such as Joliet, the automotive traffic system is made up of Federal, State and County highways, as well as local rural roads and municipal streets. Obviously, the development, improvement and maintenance of such a system cannot be undertaken or administered by any one road building agency.

Because of the growing demands for improved traffic facilities, and the limitations on funds available for such improvements, **it is of prime importance that maximum results be obtained from each dollar expended.** Therefore it is most desirable that the traffic improvement efforts of the Illinois Division of Highways, Will County, and the City of Joliet be coordinated and applied to a unified and well-integrated system under a comprehensive all-inclusive plan.

The Illinois Division of Highways and the Bureau of Public Roads of the U.S. Department of Commerce have long recognized the benefits and savings possible from a comprehensive approach to street and highway planning, and have cooperatively undertaken the provision of such planning for the larger urban communities in Illinois. During the summer of 1953, within the Joliet urban area, these two agencies, with the cooperation and assistance of local bodies, conducted a comprehensive and thorough study of traffic conditions. Included in this survey were a complete investigation of the origins and destinations of all types of traffic, information concerning the composition of traffic as to vehicular types and weights, concentration of traffic volumes and extensive data covering the use of existing streets and highways. These data have been assembled by the Illinois Division of Highways and have been organized in graphic and tabular form. These comprise the underlying information for the development of the complete plan. It is intended in this report to duplicate only as much information from those surveys as is necessary to illustrate the several findings and recommendations.

Following the survey and assembly of the factual information, the Bureau of Public Roads and the Illinois Division of Highways jointly engaged the firm of H. W. Lochner and Company, Engineers, to analyze the data and prepare the comprehensive plan. This step was taken to gain additional engineering thought on Joliet's street and highway problems, and to insure freedom from any bias which might enter into a plan if it were prepared by any one of the road building agencies. During the period of study leading to the formulation of this report, conferences were held between the consultant and the sponsoring agencies as well as the officials of the county and municipality; and the plans and suggestions of those several agencies have been reviewed and taken into consideration. **However, unless otherwise stated, the findings, conclusions and recommendations contained herein are entirely those of the consultant.**

The Existing Traffic Situation

The area of study, as agreed upon between the sponsoring agencies and the consultant, is that encompassed by the current corporate limits of Joliet plus an additional mile in all directions. The area studied can best be understood by an examination of the full page maps which follow in the report.

The Survey

The survey was conducted by the Illinois Division of Highways and was executed in two parts, one during summer weekdays, Monday through Friday and another on a summer Sunday. Approximately 181,000 vehicle drivers were questioned as to the points of origin and destination of their trips. On a selected Sunday approximately 16,300 drivers were interviewed at two important stations.

Information obtained from the weekday interviews was representative of the major traffic movements on an average summer weekday in 1953, and represented approximately 156,000 vehicle trips, which were distributed with respect to type of vehicle and trip characteristics as follows:

TYPE OF MOTOR VEHICLE	NUMBER OF TRIPS			
	Internal	Internal External	External Through	Totals
Automobiles	77,232	48,409	9,694	135,335
Trucks and Buses	10,887	7,360	2,126	20,373
TOTALS	88,119	55,769	11,820	155,708

Traffic Composition

The 1953 traffic survey revealed that, on an average summer weekday, approximately 156,000 vehicular trips were made within, to, from and through the Joliet area of study as previously defined. In addition to this daily volume, there were a number of short trips within Joliet which could not be sampled by practical methods. However, **the survey was sufficiently complete to serve as a sound basis for a comprehensive plan.**

The trips exhibited a great variety of characteristics as to vehicular type, purpose of trip, length of travel and routing. These complex urban traffic movements can best be understood when divided into their basic origin and destination types. **Under this origin and destination classification there are three types of traffic: internal, external through, and internal-external combination.**

The "internal" trips are those which **begin and end entirely within** the Joliet urban area. Examples of this type of trip are those made between home and place of employment, and those between residential areas for social or recreational purposes. Some 88,100 of these internal movements, not including some short length trips of minor significance, were made on an average weekday at the time of the origin-destination survey, or 56.6 per cent of the surveyed daily trips to, from, through, and within urban Joliet. Of these internal trips approximately 49 per cent had their origin or destination within the central business district.

The "external-through" trips, sometimes referred to as "through", are composed of **traffic that is passing completely through the Joliet area.** A typical through trip would be one originating in Aurora and ending in Kankakee, passing through Joliet en route. Of the traffic on all of the highways and roads entering and leaving Joliet, approximately 30 per cent, or a total of 12,000 vehicles, passed through the area on an average weekday at the time of the survey, constituting 7.6 per cent of the total surveyed trips of all types.

The "internal-external combination" trips consist of **traffic that is moving between Joliet and points outside of that city.** These are sometimes referred to as "local" or "terminating" trips. A typical example of such a trip would be one originating in Chicago and terminating in the Joliet urban area. On an average weekday there were approximately 56,000 terminating trips entering and leaving the Joliet area, comprising 35.8 per cent of the total surveyed trips. Of these trips approximately 14,300 or, 26 per cent, either originated or terminated within the Joliet central business district, with the remainder having origin or destination in the Joliet area outside of the central area.

A better understanding of the "through" and "terminating" traffic can be gained by considering **only the traffic which enters Joliet** via the surrounding highways and roads. At the time of the survey there were 39,700 trips **entering** the urban area on an average weekday. Of these, 27,900, or 70 per cent, terminated within the defined urban area, while 11,800, or 30 per cent, passed through.

The following tabulations show a comparison of traffic data for the Joliet area with that of other surveyed Illinois urban communities:

PERCENT OF TOTAL TRAFFIC

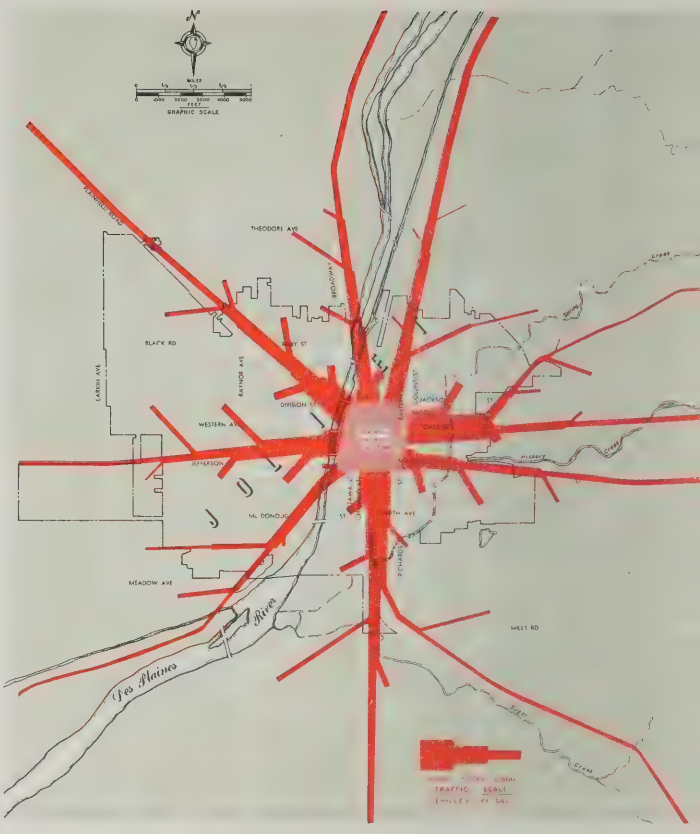
Urban Area	Internal	External Through	Internal-External Combination
Danville	53%	6%	41%
JOLIET	56.6%	7.6%	35.8%
Kankakee	58%	9%	33%
Mattoon	65%	7%	28%
Decatur	66%	5%	29%
Rockford	74%	2%	24%

PERCENT OF APPROACHING EXTERNAL TRAFFIC

Urban Area	Destined to City	Destined through City
Peoria	88%	12%
Rockford	83%	17%
Danville	78%	22%
Decatur	76%	24%
JOLIET	70%	30%
Mattoon	67%	33%
Kankakee	63%	37%

Upon examination of the first table it will be noted that the internal and terminating traffic movements in the Joliet area are fairly high, giving emphasis to a program of **bettering and improving the connections between the several major traffic generating**

ORIGIN AND DESTINATION TRAFFIC FLOWS
—INTERNEIGHBORHOOD AND EXTERNAL



ORIGIN AND DESTINATION TRAFFIC FLOWS
—TO AND FROM DOWNTOWN JOLIET

areas within urban Joliet. The second table indicates that of the traffic entering the Joliet area via the surrounding highways and roads, in comparison with other Illinois urban areas, a fairly high percentage passes completely through. However, the total volume of through traffic is quite modest, and **no great emphasis should be placed on the development of by-pass highways for the purpose of handling through traffic only.**

The survey revealed that of the 55,000 trips which enter the downtown business district each day, **about half are destined to that area and the other half are not. Efforts should be directed toward the greatest possible diversion from the downtown area of traffic not destined to it.**

Origin and Destination Traffic Pattern

The accompanying charts graphically show, in composite fashion, the desired paths of travel of all vehicles moving to, from, through and within the Joliet urban area on a typical weekday at the time of the origin and destination survey.

The traffic bands show the lines along which traffic desires to move, **without regard to the existing street system** or other traffic barriers such as railroads and rivers. The widths of the bands indicate the daily volume of traffic desiring travel along the paths shown.

To more clearly show the make-up of Joliet's traffic pattern the total daily movement has been divided into three types; that moving to and from the central business area, that moving to and from other zones within the city and that passing entirely through Joliet.

Considering first the downtown movement, the red, bands reveal the approximate paths which traffic desires to follow between the business center and outlying areas and highways. The downtown movement totals some 57,000 trips per day, or about 37 per cent of Joliet's total traffic movement. Considering its volume, its concentration within a relatively small zone, and that it will expand in somewhat the same ratio as will Joliet's growing population, **it is quite clear that this movement should receive careful attention in a sound street and highway plan.**

Now turning to the traffic moving to and from other zones in Joliet, which are shown on the green bands, five major movements are apparent. There are two east-west flows, one at either end of the central area, another running in a north south direction immediately east of the business center and two lesser, but still important, north-south movements on the west side of the river. The conflicts between this class of traffic and the downtown destined movement is readily apparent, lending emphasis to a plan for the orderly separation of these heavy traffic flows.

The **comparatively modest volumes of external through traffic** are shown on the diagram in black. These have been combined somewhat to conform to the general paths which these movements follow via the marked highway system. As may be seen, there is considerable convergence within the central area, again producing conflict with the previously described movements. A sound plan should provide, to whatever degree is possible and practicable, a reduction in this type of conflict.

Traffic of the Future

Like that of most urban communities, Joliet's street and highway system was developed before the great increases in automobile ownership and use which have occurred in the past thirty years. Consequently, **there are but a few street rights-of-way wider than 66 feet and few streets offering more than 30 feet of pavement width.**

The Des Plaines River, running north and south through the Joliet area, and dividing the city into east and west sections, has severely limited the continuity of the east-west street pattern. The east section of Joliet is so frequently traversed by the railroad lines, and so covered by large industrial installations, that the continuity of both the east-west and the north-south street patterns is very poor.

To meet the ever increasing traffic demands and needs, Joliet has applied better pavements, some widenings and other improvements, including the development of several one-way couples in and near the central business district, all of which have produced a measure of relief. Because of the heavy cost and limited financial means, **these improvements have not kept pace with the demands of traffic,** with the result that congestion is apparent at many locations and, at several it is critically acute. This has been the general experience in most all urban communities and, based on this, there has developed an acceptance of the need for keeping pace with anticipated traffic growth as well as remedying the more acute traffic ills.

Most engineers are in general agreement that twenty years is the approximate future period for application to comprehensive street and highway planning. A shorter period of time to provide for needs would invite early obsolescence, and a plan of longer range would result in a staggering financial problem. For a twenty year interval, traffic volumes can logically be estimated, and the resulting construction projects are of such magnitude that there is reasonable probability of attainment. Thus the street and highway needs as set forth in the subsequent sections of this report are based on **traffic as it exists today and as it is estimated to develop by 1975.**

External Traffic—1975

External traffic, that operating on the surrounding highways and roads, and moving to, from and through the Joliet urban area, in the next twenty year period will undoubtedly increase. Because of the volume of traffic that either originates or terminates within the area, it is important that the external traffic be given consideration in the over-all picture. It also must be given consideration in the review of the traffic problem because the external highways are the extensions of some of the more important city streets.

The Illinois Division of Highways has directed much of its research to trends in volume and traffic composition using the State highway system. Based on this research, it has prepared forecasts of the traffic volumes which will use the highways surrounding the Joliet area in 1975. A list of the principal external routes, and their estimated volumetric increases, are given in the following tabulation:

HIGHWAY ROUTE No.	Approaching From	AVERAGE DAILY TRAFFIC VOLUME 1955	1975	Per Cent Increase
Ill. 4A	North	11,500	17,480	52%
U.S. 6	North East	5,400	7,560	40%
U.S. 30	East	11,500	16,500	40%
U.S. 52	South East	2,900	4,400	52%
U.S. 66 Alt.	South	8,000	12,160	52%
U.S. 6	South West	7,200	12,100	68%
U.S. 52	West	8,000	11,200	40%
U.S. 30	North West	11,500	16,500	40%
U.S. 66 Alt.	North	13,000	19,760	52%

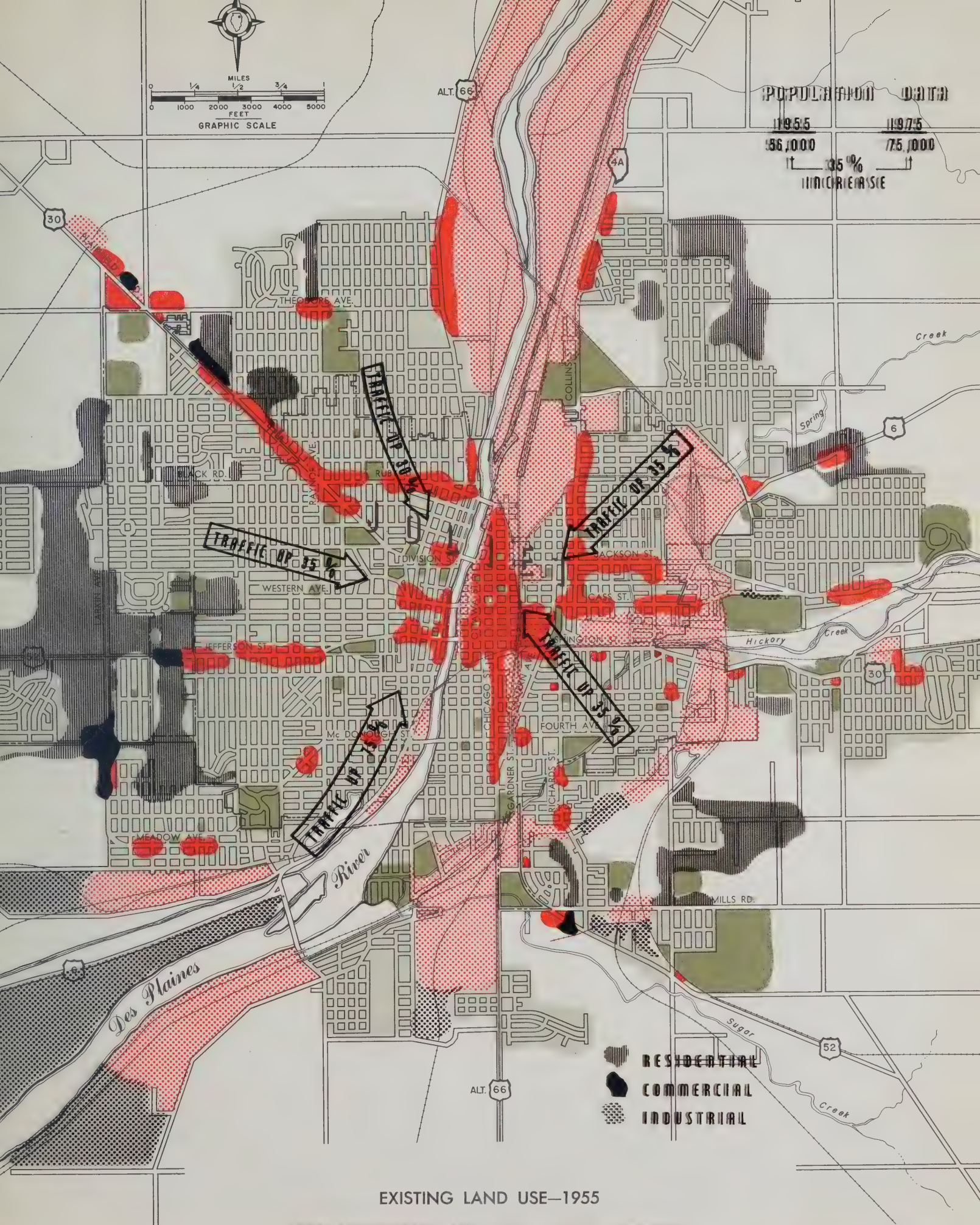
As will be noted from the above tabulation, the highways carrying the largest vehicular volumes today will continue to carry the largest estimated traffic volumes in 1975, although the estimated rate of increase is less in some instances.

Internal Traffic—1975

As was pointed out previously, some 56% of traffic operating in the Joliet area is moving between points entirely within that area, and that an additional 36% has origin or destination within that same area. Therefore, when looking to the future, the internal traffic situation will be of a most important factor, and must be given careful attention in a logical plan for the improvement of the street and highway system in the Joliet area. To approach the question of future development intelligently, and to relate population and traffic data, it was necessary to study the existing land uses in Joliet.

In general, Joliet's development would be typical of the more active American industrial city, with its economy favorably distributed between the several fields of transportation, manufacturing and other industries, trade, and agriculture. Several barge lines maintain waterway terminals and service facilities, while six railroads serve Joliet, providing interchange facilities for rail and river traffic. There are also approximately 50 different contract and common carrier truck lines operating in the Joliet region.

Joliet's favorable transportation facilities, and its convenient location between raw materials and markets, have resulted in the rapid expansion of manufacturing and other industry. Its location and transportation advantages have established it as a primary trading center.



EXISTING LAND USE—1955

1975 ANTICIPATED USE AND TRAFFIC GROWTH

RESIDENTIAL COMMERCIAL INDUSTRIAL PUBLIC AND INSTITUTIONAL

TRAFFIC UP 35 %
TRAFFIC UP 30 %
TRAFFIC UP 35 %
TRAFFIC UP 35 %
TRAFFIC UP 15 %

EXISTING LAND USE—1955

RESIDENTIAL

COMMERCIAL

INDUSTRIAL

PUBLIC AND INSTITUTIONAL

In the early development of Joliet, the city was laid out along the Des Plaines River and, as the city grew, the street system was developed on a north-south, east-west grid with occasional exceptions adjacent to the diagonally located railroad tracks.

With the exception of the depression years, Joliet's population background presents a picture of consistent growth. During the 1940-1950 census period the expansion rate was in excess of 20%, although a portion of this increase was due to an expansion of the City's corporate area. The present population is estimated at some 56,000 persons. **A projection of the population data indicates that, by 1975, the community might well number some 75,000 persons.** The internal traffic situation at that time will relate directly to the areas in which the increasing population will live, work and conduct business.

The transparent overlay of the existing land use map reveals the areas which appear most likely to be developed in the next twenty years. As may be seen, a relatively large area will be required, due to a projection of the current trend toward larger homesites. Also of note is the location of the residential growth at the outer edges of today's urban development, with the requirement for extended lengths of improved major streets.

The greatest amounts of residential growth are foreseen in the western zone of the city. Development is now under way in that part of Joliet, with every expectation that it will continue. Other areas of considerable increase are shown in the northwest and southeast sections of the community.

A pattern for the location of new or expanded industry is readily apparent, the heavier industry requiring waterway facilities and locating along the waterway south and west of Joliet, while the lighter industry, not needing the waterway facilities, will find good locations adjacent to and within the existing industrial areas east of the river near rail and highway facilities.

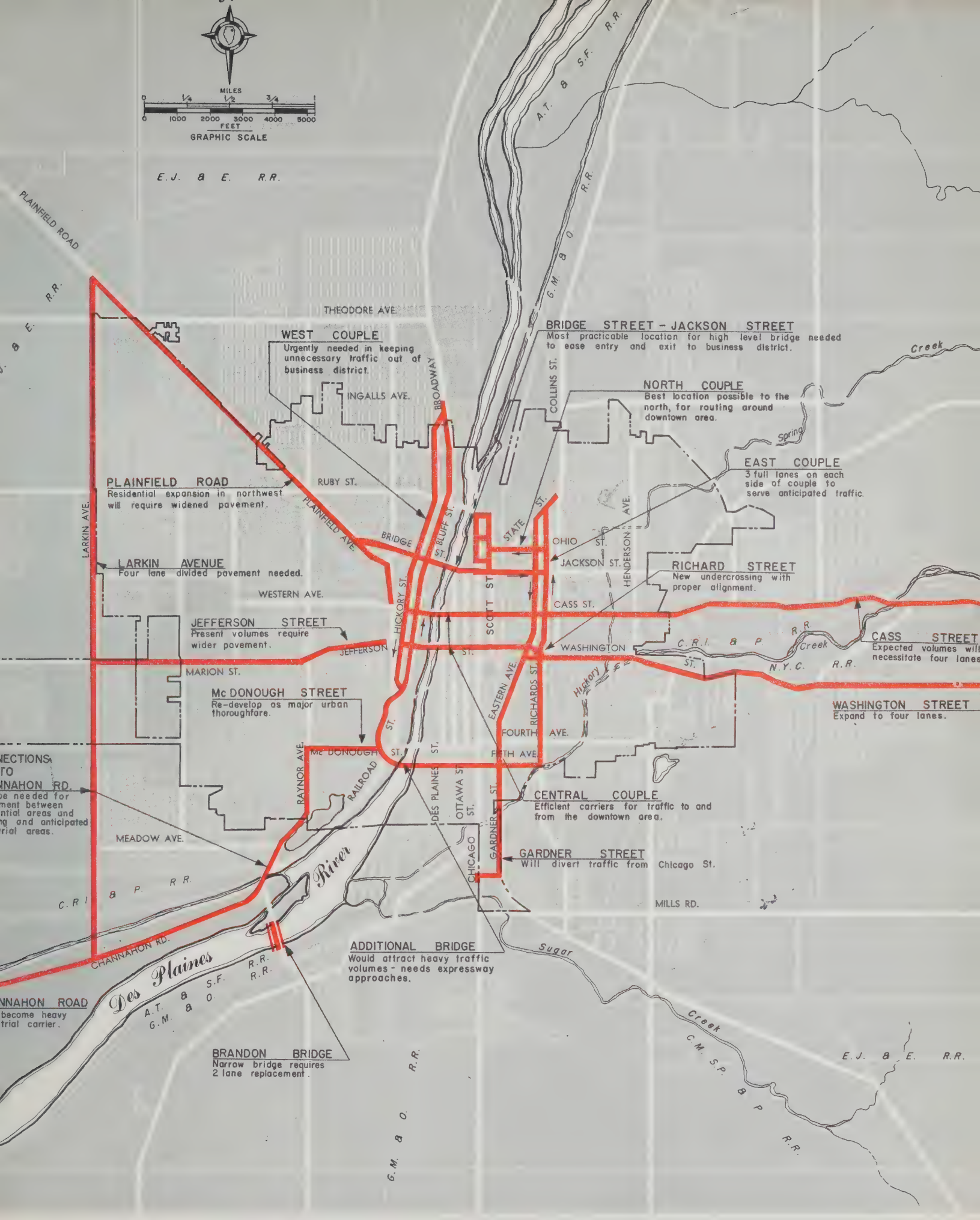
As is shown on the overlay, traffic now generated in the west section of the urban area is estimated to increase by thirty-five per cent in the next twenty years due to the anticipated development of this area. In the northwest area, the increase in traffic is estimated to amount to thirty per cent, while the traffic from the southwest section is estimated to increase by seventy-five per cent because of the anticipated increase of the industrial development there.

In the area east of the river, the traffic will increase an estimated thirty-five per cent, principally due to the industrial expansion expected in that zone.

The existing central business district is fairly well centered in the Joliet urban area. **It should continue to function as the center of commercial activity for the urban area.** Its stores, shops, hotels, recreation and transportation terminals will continue to attract large numbers of people and major traffic volumes. In all likelihood downtown Joliet will continue as the urban area's largest single zone of vehicular destination. However, because of physical barriers, and lack of proper space in which to expand, the area will probably not grow in the same proportions as will the anticipated population of Joliet. **The downtown parking problem, as well as the several traffic problems, must be more fully solved if the area is to keep pace with its potentialities.** Assuming a prompt and vigorous attack on these problems, the development of new large, regional-type shopping centers is not foreseen. However, there will almost surely be developed neighborhood shopping areas in the new outlying zones of residence, and possibly one or more community shopping districts. None of these, however, will attract activity and traffic to the degree that will the present downtown area **if it is properly improved in its service to auto-borne patrons.**

Joliet's Street and Highway Needs

With the existing traffic movements as revealed by the origin-destination survey, and the 1975 movements as estimated from the population and land use studies, it was possible to study and analyze traffic improvements as to their continuing value as well as their immediate necessity, and to develop a system of improved carriers to provide adequate service for the coming two decades. A description of the principal findings concerning major traffic needs and improvements follows. The locations of the described improvements are shown on the accompanying map.



STREET AND HIGHWAY NEEDS AND RECOMMENDED DEVELOPMENTS

Joliet and the Interstate Highway System

In 1944, a 40,000 mile network of highways to serve the national defense, and to connect the major cities of the country, was established by the Federal Government. Because of the high standards established for the development of this interstate system, its extensive mileage, and the limited funds available for highway expansion, only a fractional part of the system has been completed.

One element of the designated system is an east-west route running eastward from the Davenport-Rock Island area, which would pass around Chicago and connect to South Bend, Indiana. This route, as well as the other elements of the Interstate System in Illinois, are currently under intensive study by the Division of Highways. In the case of subject route, the only Interstate Highway which might potentially be routed through or quite close to Joliet, three alternative routings are being evaluated. One would run in an east-west direction and would lie about five miles to the south of Joliet. Another would also run in an east-west direction, passing along the southern edge of Lockport. The third, would be the toll highway which will pass around the southwest quadrant of the Chicago Metropolitan Area and then proceed westward via Aurora to the Davenport-Rock Island area.

It is obvious that with these relatively remote locations with respect to Joliet, the **development of the Interstate System will have but minor effect on the traffic problems near and within that city.** There will be some reduction in the volume of traffic moving through Joliet on U.S. Routes 6 and 30, but this reduction will not alter requirements for the development of these routes within the urban community.

The Downtown Traffic Problem

Joliet has several serious traffic problems, but one which dwarfs all the others in its complexity and effect upon the community. That problem is the **traffic snarl within and adjacent to the central business district.** It is thoroughly obvious that any sound plan for the betterment of Joliet's traffic condition must provide an answer to this most serious and vexing situation.

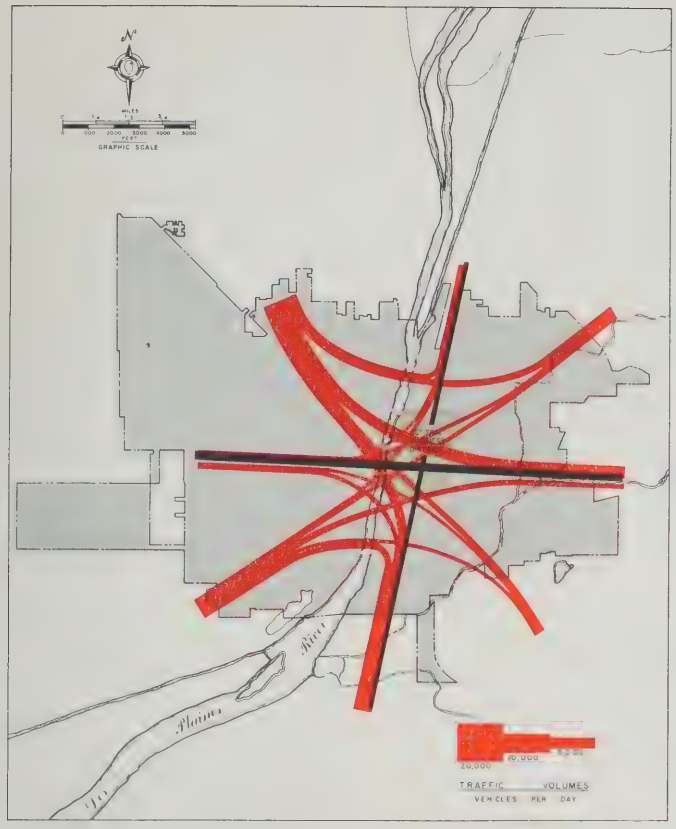
Turning first to the factors which underlie the problem the following facts and observations are pertinent.

1. **Joliet has an unusually active business district.** The daily traffic movement to and from this area compares with that of cities of considerably greater size.

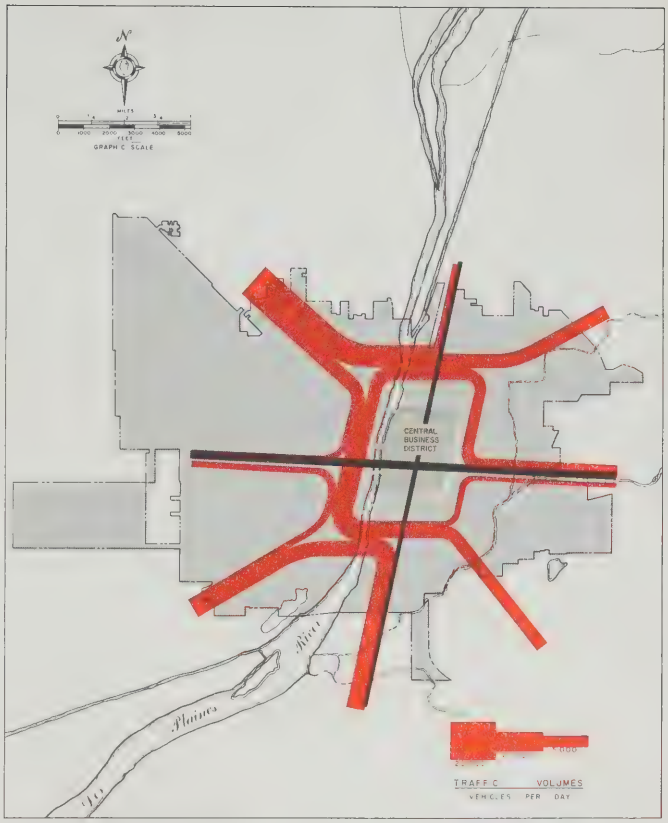
2. **The placement of the business district is not well balanced with respect to the other elements of the urban community.** It is on the east side of the Des Plaines River, whereas the majority of Joliet's population has settled on the west side. As was brought out in the land use studies, this unbalance will be accentuated in the coming twenty years. In addition, the bulk of the city's industrial installations are located on the east side, which places the business center on the path of travel between residences and places of employment.

3. **The business district is hemmed in by natural and man-made barriers.** It is bordered on the west by the river, on the north by an intense industrial complex and on the east and south by several complicated railroad installations as well as the meanders of Hickory and Spring Creeks. These several barriers have limited the number and the directness of approach arteries to the business center, which in turn has created intense traffic concentration.

4. **The downtown area is the focal point of nine radiating state and Federal highway routes.** While it is not at all uncommon or unreasonable to focus the marked state highway system on the central areas of cities, the number of such routes in Joliet's case is



TRAFFIC PASSING
THROUGH DOWNTOWN JOLIET



POSSIBLE REDISTRIBUTION OF
DOWNTOWN THROUGH TRAFFIC

unusually high. As was brought out previously in the review of traffic facts, Joliet's traffic mixture contains a relatively high proportion of traffic having origin or destination outside of Joliet. Whether this is the cause or the effect of the high number of radiating marked routes is not particularly important, but the passage of these routes and this traffic through and adjacent to the business center is a decided factor contributing to the downtown traffic problem.

5. **In downtown Joliet, traffic in motion must compete with parked cars** for the use of the available pavements. Again, this is not uncommon—most cities have the same problem, but in Joliet it is aggravated by the unusually large number of cars with central area destinations, the limited amount of off-street parking now provided and the fact that most of the pavements are narrow.

These, and other factors in combination, bring about the picture of confusion and delay now so apparent in and adjacent to the business center. The city has done its best to improve the situation with the limited means available. Undoubtedly the installation of the downtown one way street system has provided some betterment of conditions. However, the **full solution of the problem will require aggressive, continuing and, at some places, drastic and costly action.**

How Can This Situation Be Remedied?

As was brought out in the origin and destination survey, **about half of the traffic entering Joliet's downtown area has no business there**—it is there because there are no diversionary routings or because the arteries which are in a position to route traffic around the central area are deficient in capacity and directness. It was apparent from

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the outset that if proper diversionary routings could be located and developed, there would be resultant benefits to downtown terminating traffic as well as the divertible elements directly served. The traffic not belonging in the downtown area traffic was therefore studied in detail to determine what type and calibre of routes should be provided. The accompanying diagrams show, in simplified form, the results of that study. The first diagram shows the traffic flowing through the business center to and from other areas of origin and destination. The second diagram shows how much of that traffic **could be** kept out of the downtown area by the development of an adequate circumferential system. As may be seen, a preponderant majority of the movement through the central area could be kept out of that area or at least confined to its outer edges. It is also apparent that the entire area should be encircled. The approaching traffic converges from all directions and **cannot be diverted to a short length of high-type highway passing along one or two sides.**

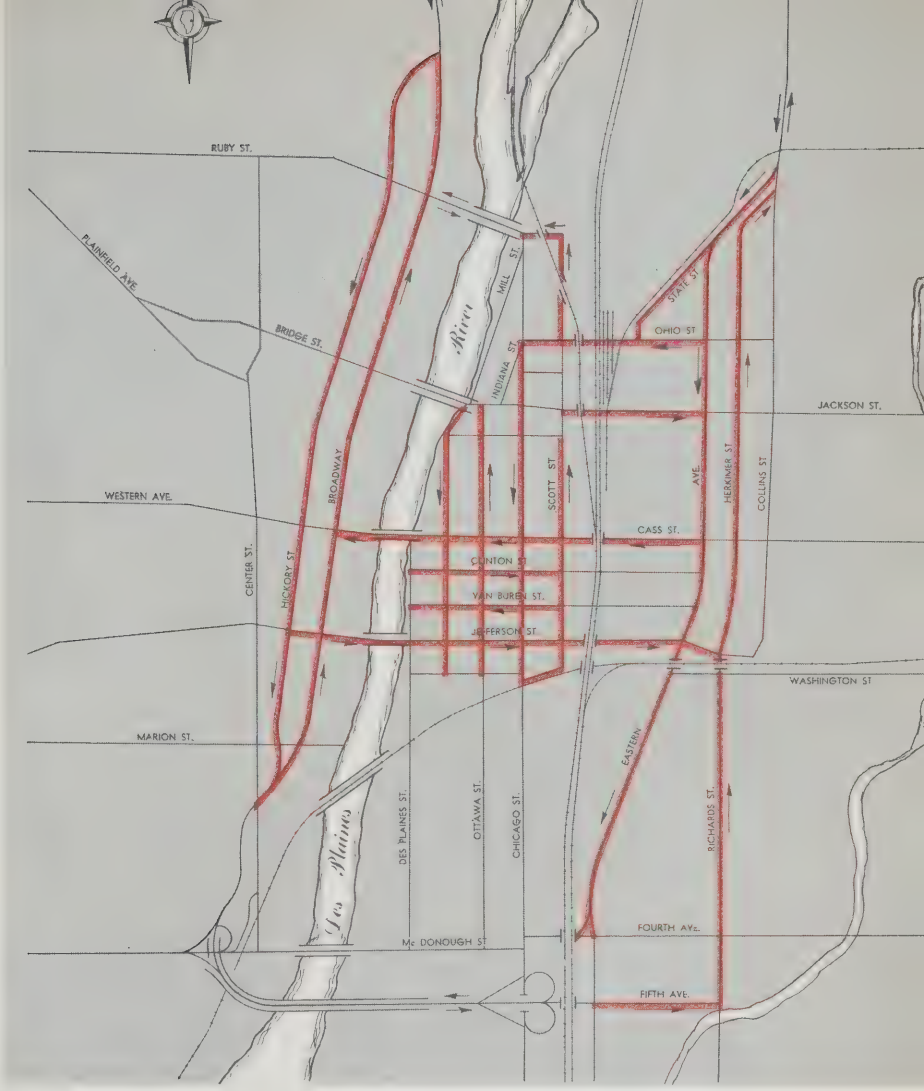
Armed with this basic factual data, a street by street investigation was made around the edges of the downtown area. Initial efforts were discouraging, since there are no streets which, with widening and channelization, could be converted into high-type carriers. The majority of the streets in the downtown fringe area offer rights-of-way of 66 feet with pavement widths of 30 feet or less. It became apparent that **the best solution would be the development of a system of well connected one-way couples.** Numerous alternative systems were explored before the recommended one was decided upon. Considered in the exploratory process was the question of how the recommended downtown by-pass and distributor system could most effectively and economically be connected to other street and highway improvements which will be requited in the twenty year future. **The selected system is the one which most fully meets the several requirements.** It is illustrated on the accompanying map and pertinent facts relating to its development and operation are as follows:

The East Couple—Eastern Avenue, Herkimer and Richards Streets

As is shown on the diagram, this one way couple would operate over these streets between 4th and 5th Avenues on the south and Ward Avenue on the north. A direct connection to Collins Street at the north end of this couple is necessary for safety and smooth operation. At the southern terminus of Eastern Avenue, that carrier should be given a direct connection to Gardner Street so as to invite use of this latter entry route to central Joliet rather than presently crowded Chicago Street. The present 66 foot rights-of-way lend themselves well to the provisions of three lanes for traffic movement. With the exception of Eastern Avenue between Liberty and Jackson Streets, sufficient pavement width is now available. This length should be widened to 36 feet before the couple is placed in operation. The remaining lengths of the couple should be widened to 36 feet as soon as is practicable. Also as soon as possible, the Richard Street undercrossing of the Rock Island tracks should be rebuilt to eliminate the offset in the Richards-Herkimer alignment.

It is recommended that when this couple is placed in operation, all curb parking along it be prohibited. It is believed that this measure can be incorporated without undue hardships to the fronting property owners. If compromise is necessary, then parking should at least be prohibited between the hours of 7 and 9 A.M. and 4 and 6 P.M., and restricted to one side of the streets only at other hours. However, the 20 year anticipated volume to be served indicates the necessity of three full lanes on each carrier. The recommended end connections are shown on the strip map at the back of the report

RECOMMENDED
ONE-WAY STREET SYSTEM



The West Couple — Hickory Street and Broadway

This is the couple most urgently required in keeping by-passable traffic out of the business center. It should be developed as quickly as possible. The improvements necessary before it can be brought into action include the direct connection of Hickory to Broadway at the northern terminus near Ingalls Avenue, the widening of the Broadway pavement south of Ruby Street to 36 feet, a similar widening of Hickory Street north of Moran Street, an improved connection between Broadway and Bluff Streets via Marion Street to enable northbound traffic on Broadway to reach the Jefferson Street bridge approach, and an extension of the couple southward from Marion Street to connect to Center Street. These several improvements may best be understood by an examination of the strip maps at the back of the report. As soon as is practicable, the Broadway overcrossing of Jefferson Street should be re-built at a minimum pavement width of 36 feet. Curb parking should be restricted on the couple in the same fashion as was recommended for the east couple.

The North Couple—
Jackson and Ohio Streets

While these streets are not as far north as would be ideal for the development of an efficient routing around the downtown area, it is believed that they will accomplish this function reasonably well. Each of these streets has an adequate undercrossing at the Santa Fe tracks, and each is developed with a pavement sufficiently wide for the accommodation of the anticipated one-way traffic volumes, if curb parking is prohibited or curtailed.

Before recommending this couple, thorough consideration was given to the possibility of extending a new route eastward from Ruby Street over the tracks and through the American Steel & Wire property to connect to Collins Street. However, the many closely spaced tracks to be crossed, and the formidable industrial plant which such a route would bisect, would raise its cost far beyond practical limits. Its improvement would preclude the development of the many other street and highway improvements considered necessary in and near Joliet within the twenty year future, and therefore has not been included.

The Central Couple—
Cass and Jefferson Streets

Experience has repeatedly shown that, to be of greatest value, one-way operation of streets should extend over the greatest length possible. It is recommended therefore that the present one-way operation of Cass and Jefferson Streets be extended westward across the river to the recommended west couple (Hickory and Broadway) when that latter couple is placed in operation. This operation will transfer the complex turns, now occurring within the business district, to the west side of the river, where there would be considerably less conflict because of less local circulatory movement. In addition, it would make for more efficient use of the two bridges which now, despite fairly generous pavement widths, usually operate as two-lane carriers. It is further recommended that, as quickly as possible, rush hour (7:00 to 9:00 A.M. and 4:00 to 6:00 P.M.) parking be prohibited on these vital downtown streets.

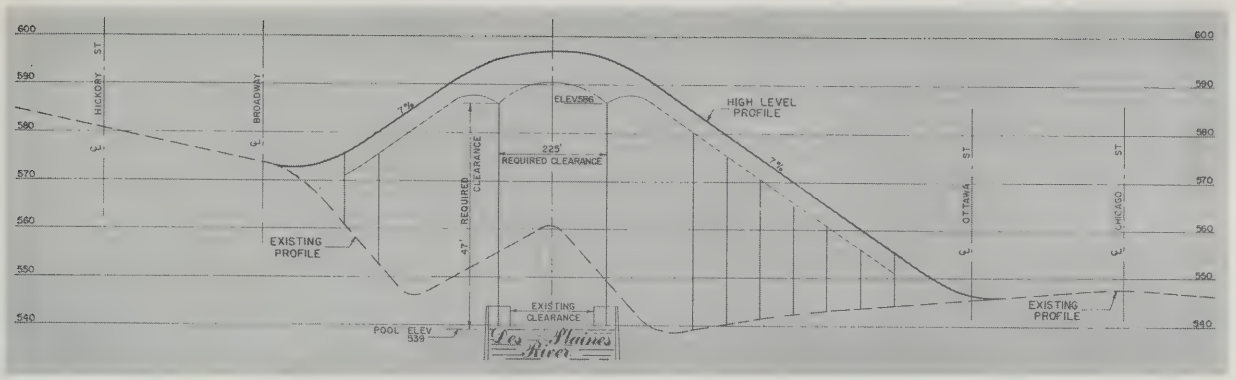
It is urgently recommended that this system of one-way carriers be developed and placed in operation at the earliest possible time.

Bridge Requirements

Traffic movement across the Des Plaines River in the Joliet area is now served by six bridges—those at Ruby, Bridge, Cass, Jefferson and McDonough Streets, and that at Brandon Road. During the course of the study the operations of these bridges were repeatedly observed and the records of their operations were carefully examined and analyzed.

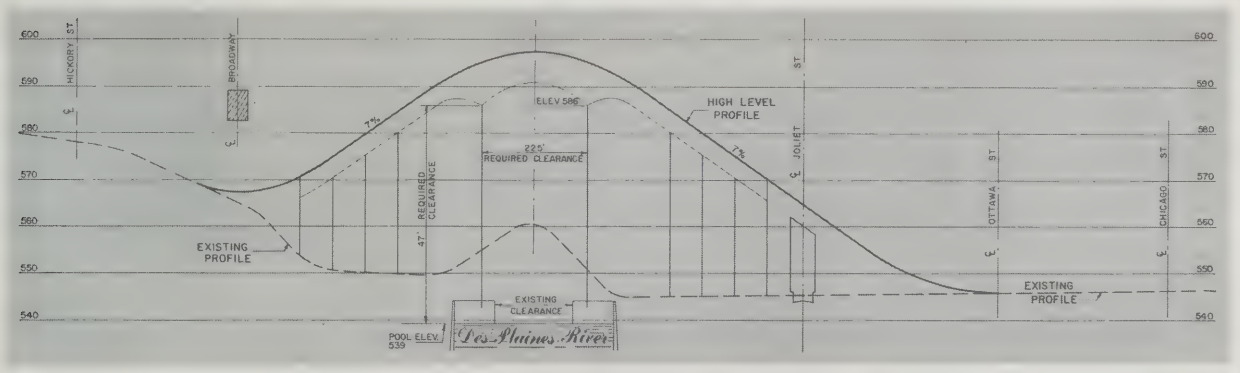
A study of the origin and destination traffic pattern as it exists, and as it is anticipated to develop in the coming two decades, clearly shows the concentration of traffic desire lines for cross-river movement within the area between the Ruby and McDonough bridges. **The existing bridges are thus very well located.**

The most serious inhibition on the proper functioning of the five central bridges is the interruption caused by the passage of water-borne traffic. A study of the Corps of Engineers records indicates that these bridges are open for about a total of six and one-quarter minutes during the combined morning and evening rush traffic hours. In total effect upon freedom of vehicular movement this delay would be about one-fifth as serious an impediment as are the "stops" and "go's" imposed by the traffic lights on the bridge approaches. However, the immediate and direct effect is much more serious in that the average interruption is of a five minute duration. During this interval, considerable



PROFILE STUDY—CASS STREET

On the east side a seven per cent grade would overcross Joliet Street some 29 feet above the present intersection level and would return to ground at the intersection of Cass and Ottawa Streets. The present 66 foot right-of-way on Cass Street is not sufficiently wide for the development of frontage streets on either side of the bridge approach, hence acquisition, or the payment of total damages would probably be necessary between the river and Ottawa Street. While these properties are not the best business locations, they are actively used today, and their acquisition would add major costs to the development of a high level bridge. The construction of such a bridge at this location is estimated at $2,750,000.



PROFILE STUDY—JEFFERSON STREET

Jefferson Street

Here again, a high level bridge meeting Federal requirements would be some 35 feet higher than the existing bascule structure.

A seven per cent grade would be required to pass the west approach under the existing Broadway overpass. Similar to the previously described bridge situations, Bluff Street would be overcrossed and interchange with it could not be practicably arranged. And similarly, the property fronting on Jefferson between Broadway and the river would be isolated by the high approach, and thus probably damaged to full value.

On the east side of the river a high level bridge approach, with a seven per cent grade, would overcross Des Plaines Street some 43 feet above ground level, would overcross Joliet some 17 feet high and would return to grade of Ottawa Street. Again, the existing right-of-way on Jefferson Street would not be wide enough to develop the approach and, in addition, the paralleling streets to service fronting properties, with the result that such properties, between the river and Ottawa Street, **would be heavily, if not totally, damaged.** This frontage, while not the prime retail area in downtown

Joliet, is intensely used by some 30 small shops and stores, and **would be very costly to acquire.**

The estimated cost for a high level bridge and its approaches at Jefferson Street is $4,160,000.

McDonough Street

As will be brought out in a following section of the report, a new six lane, high level bridge, with expressway connections, is recommended for development one and one-half blocks south of McDonough Street. Its development would **operationally supplant** the existing McDonough crossing, hence a high level bridge at this location has not been studied in detail.

Why Not Raise the Existing Bridges?

Consideration has been given to the possibility of raising the existing bridges to provide high level clearance. The present horizontal clearance of the bridges, about 150 feet, would not meet the Federal requirements of 225 feet. In addition, the profiles of the present structures, with the steep grades, do not lend themselves to either a raised profile or to the necessary extension of the approaches. Further, the widths of the bridge roadways do not meet present day requirements, and to perpetuate these widths, at great cost, would be a poor use of public funds. And from the cost standpoint it would be about as costly to raise the bridges as to build new structures. For the same reasons it would be impracticable to raise the existing structures to some intermediate level.

The Recommended Procedure

As has been brought out above, the only **complete solution** to the problem **is the development of high level bridges.** Also presented were facts to show that the rebuilding of the Ruby Street bridge at high level would be impracticable, and at McDonough Street, unnecessary. The remaining three bridges, those at Bridge, Cass and Jefferson Streets, it was found, could be redeveloped at high level with practicability, but at a total cost of some $9,580,000. Later in this report there will be developed a program for meeting the twenty year street and highway needs for the **entire Joliet Community.** The needs are several, and the projects are of a costly nature, the total program amounting to some $17,530,000 exclusive of central area bridges. The recommendation will be that the program be financed cooperatively by the City, County and the State. It is believed that the addition of nine and one-half million dollars to this program would, in all likelihood, exceed the capabilities of the three agencies. It is further believed that the concentration of such a great proportion of the total toward a single betterment would result in an unbalanced program.

On the other hand, it is believed that one of the three bridges might be redeveloped at high level as a part of a realistic program. The recommendation is that the one at Bridge Street be so redeveloped. The reasons for its selection are as follows:

1. The present bridge offers only two lanes for movement whereas each of the other two offers four. Its expansion as a four lane carrier therefore, would **add to cross-river capacity rather than simply replacing it.**

2. Its position near, but not within, the core of the business district would permit it to serve some traffic desiring travel around the central area. **However, its principal function would be the service of traffic moving to and from the business center.**

volumes of traffic are accumulated on the bridge approaches, with the result that not only is east-west flow stopped but north-south movement on the cross streets is seriously inhibited.

As an immediate relief to this vexing problem, **it is recommended that the openings of the bridges be restricted to non-rush vehicular traffic hours.** It is understood that past efforts to achieve this betterment have been without result. **However, it is recommended that these be vigorously renewed.** An additional betterment would result if the traffic signals on the bridge approaches could be so coordinated with the bridge openings that the north-south streets could operate continuously during the intervals when the bridges are open. Then, at least, the delays would be largely confined to east-west movement and the delays to north-south movement would be minimized. It is recognized that these operational recommendations are palliatives rather than solutions to the problem. The **complete solution** can only come with the development of **high level fixed bridges.**

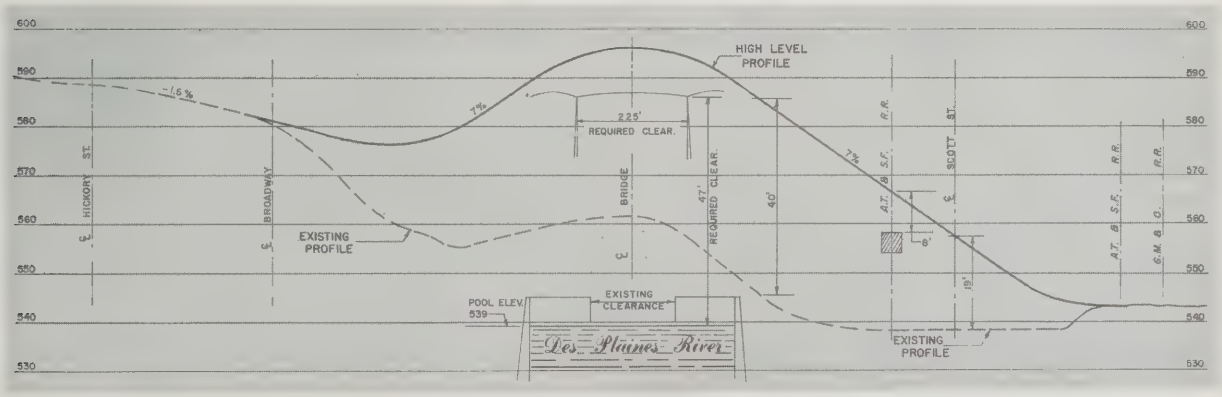
As an approach to the problem of high level bridge development, the Corps of Engineers requirements for such bridges were sought and received. These are as follows:

Vertical Clearance.....47 feet above pool stage.

Horizontal Clearance.....Policy not as yet determined. However, throughout the walled section in Joliet it should be at least 225 feet between piers and, where possible, the piers should be landward of the existing walls.

Advice was also received that there are no current plans for the expansion of the waterway in or near Joliet.

Armed with these basic requirements and information, a bridge by bridge study was made to determine the possibility and practicability of high level bridge development. The basic findings are graphically shown on the accompanying profile sketches and a description of the related facts for each of the bridges follows:



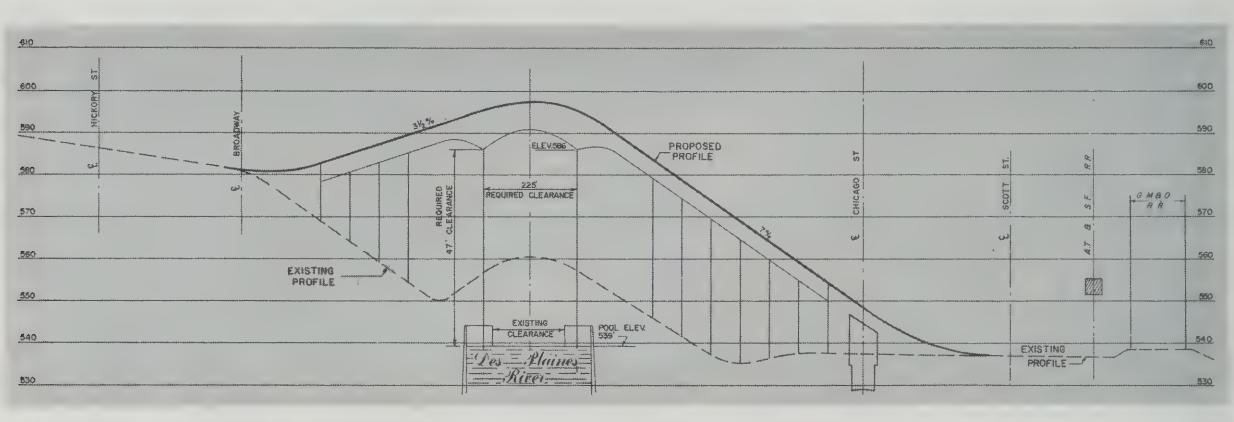
PROFILE STUDY—RUBY STREET

Ruby Street

The summit on the roadway of the existing bascule structure is at approximately elevation 561, some 22 feet above pool stage. To meet the requirements for vertical and horizontal clearance for a fixed bridge as set forth above, and allowing for structural depth, the summit of such a bridge would be placed at approximately elevation 596, some 35 feet higher than that of the existing structure.

On the west side of the river, the approach to this structure could be connected to Broadway with a reasonable grade, but could not be connected to Bluff Street. All of the fronting properties on Ruby Street between the river and Broadway would be isolated by this approach. **The west approach would thus be practical but quite costly. On the east side, a highly impracticable situation would obtain.** With a seven per cent grade (this would be the maximum for reasonable operation, and its acceptance by the highway

building agencies would be very doubtful) the approach would overcross Chicago Street about 40 feet above the existing grade, would pass 8 feet over the elevated Santa Fe tracks and would overcross Scott Street 19 feet above grade. It would return to ground level in the complex of railroad tracks some 400 feet east of Scott Street. With these differences in elevation between the bridge approach and the streets to which it would require connection to be of service, and particularly considering the complication at the Santa Fe tracks, **it must be concluded that a high level bridge cannot be practically developed on the Ruby Street alignment.**



PROFILE STUDY—BRIDGE STREET

Bridge Street and Jackson Street

The situation crossing the river, with respect to existing and high level elevations, is similar to that presented for Ruby Street.

The west approach to a high level fixed bridge at this location could be connected to Broadway with a satisfactory grade. Bluff Street would be overcrossed by this approach and interchange facilities could not be practicably provided. The properties fronting on this approach east of Broadway would be isolated by it and would have to be acquired. To the east of the river a seven per cent approach grade would overcross Mill Street 35 feet above the existing level. At Ottawa Street the approach would also be 35 feet higher than the existing grade; at Indiana Street 24 feet higher; and at Chicago Street, 9 feet higher. The approach would return to ground level near Scott Street. Again properties fronting on this high approach would be isolated and probably damaged to full value. However, these are not today intensely used. With some grade adjustments and channelizations, the approach could be reached by traffic moving to and from the business district without inconvenience. The development cost of such a bridge and approaches is estimated at $2,670,000. This does not include the improvement of Bridge Street westward from Broadway, a project which would be necessary to gain full utility from the costly bridge and its approaches.

Cass Street

Again, the vertical change entailed in the development of a high level fixed bridge would be similar to that reported for Ruby Street.

On the west approach, a seven per cent grade would be required to connect the bridge to Broadway, which connection would be necessary to properly exchange traffic between the recommended west side one-way couple and the business center. Bluff Street would be overcrossed by the approach and, again, interchange with Bluff Street could not be effectively provided. The high approach would isolate the property on both sides of Western Avenue between Broadway and the river.

3. As was brought out above, the approaches of high level bridges located at either Cass or Jefferson Street would return to grade at Ottawa Street, **approximately halfway across the business center.** To reach the approach, many drivers would first make an eastward movement and then one or more turning maneuvers. It is apparent that there would result considerable congestion near the approach on the adjacent streets, particularly with the one way street operational pattern. With the bridge at Bridge Street, however, there would be **sufficient maneuvering distance between the approach and downtown destination centers** and traffic would be better able to sort itself out into that destined, to the bridge and that destined to other areas.

4. As was brought out above, a reasonable and well balanced program would include, in addition to the high level expressway bridge south of McDonough Street, **but one additional high level bridge.** If either Cass or Jefferson were to be raised to high level then its attraction to traffic now using the other would be greatly increased and the approaches to it might well become congested beyond tolerable limits.

For these several reasons the recommendation is that Bridge Street be accorded high level redevelopment. A strip map showing the approaches and operational features may be found at the back of the report. To gain full utility of the bridge, and to enhance its service to downtown terminating traffic, Bridge Street should be expanded as a four lane divided thoroughfare and extended westward across Nicholson Street to connect to Plainfield Avenue.

It is to be recognized that the reconstruction of the Cass and Jefferson Street bridges at high level would still be highly desirable. If some means of finance, **beyond that contemplated in the balanced program contained herein,** can be found for such developments, then these might well be undertaken.

The Brandon Road bridge is now developed as a two-lane structure over the locks, but with only one traffic lane over the river to the south. Within the next few years this narrow portion should be replaced with a modern two lane structure.

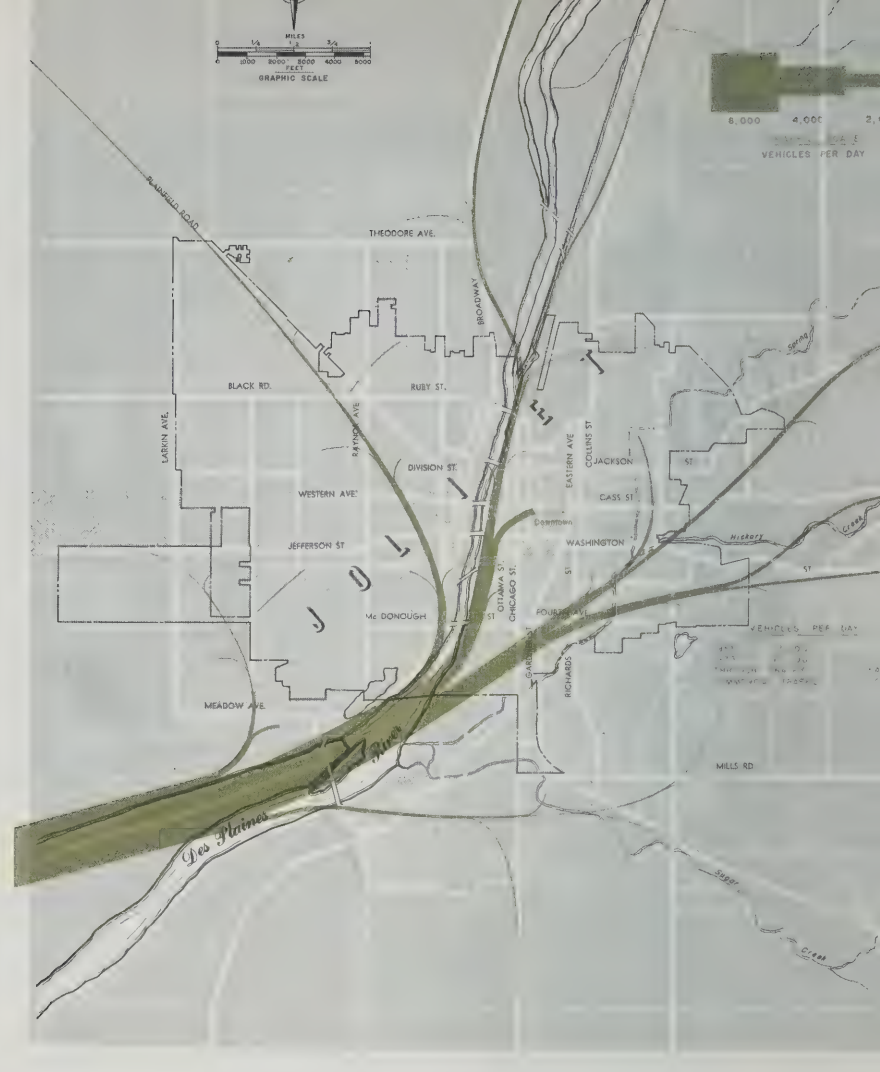
Recommended New Bridge

As was brought out previously, betterment of traffic conditions in and near the downtown area would result from the development of the by-passing one-way couples. Under the recommended plan a large volume of river crossing traffic would be concentrated in the vicinity of the McDonough Street bridge, which offers but a two lane pavement width. The recommendation is, therefore, **that an additional high level fixed bridge of six lane width be developed across the river** along a line approximately halfway between Jasper and Monroe Streets.

A bridge in this location would attract **heavy traffic volumes,** much of which would be that requiring travel around the business district, but also a considerable volume of which would be **downtown destined traffic** generated to the west of the river in the area served by McDonough Street. The volume and the character of the movements require the development of **expressway approaches** on both sides of the river. On the east, the approach would be grade separated from Chicago Street with circular and parallel ramps to connect with that artery. Directional pavements would extend to the east to connect the approach to 5th Avenue via an expanded underpass at the G.M. & O. and Santa Fe tracks.

To the west of the river, the bridge approach would overcross Railroad Street and the Rock Island tracks and then turn northward, overcrossing McDonough Street and, via a new high-type roadway, make connection to the recommended west couple (Hickory and Broadway) near Allen Street. An expressway interchange would be provided at the McDonough Street intersection to provide a high-type connection to the west for river crossing traffic as well as that operating on the recommended west couple. McDonough Street would then be redeveloped westward as a **major urban thoroughfare,**

DISTRIBUTION OF TRAFFIC
USING U.S. ROUTE 6
SOUTHWEST OF JOLIET



with four through lanes, two curb parking lanes and a narrow median divider. All of these features may be found on the strip maps at the back of the report.

Insufficient space exists for the development of ramps connecting the recommended bridge to Railroad Street. Traffic on Railroad Street can continue to use the McDonough Street bridge and, as will be brought out later in this report, the volume using Railroad Street in this vicinity will be greatly reduced by other recommended developments.

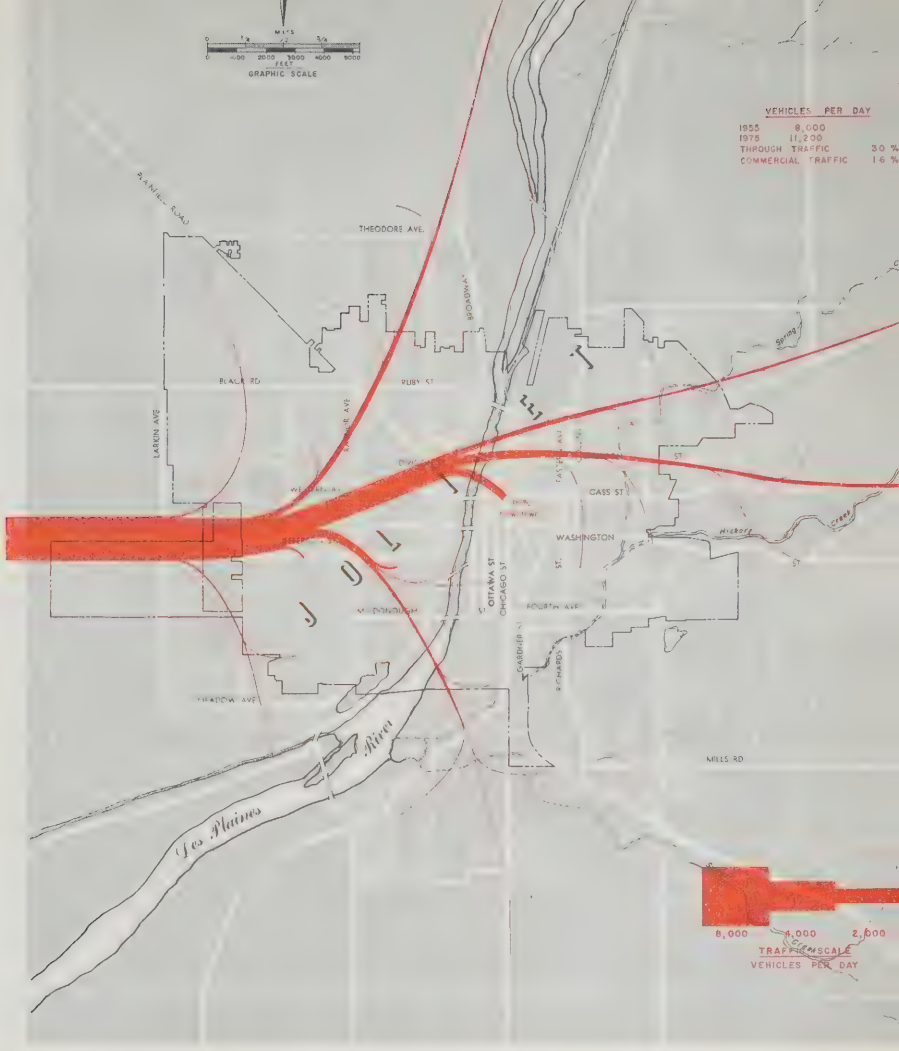
The new bridge and its expressway approaches constitute an undertaking of **major magnitude and cost.** However, these will be **well worth the investment** in the benefits rendered to motorists.

Additional Connections to Channahon Road

At the present time, there is but one connection between the western areas of Joliet and Channahon Road, that circuitously provided at Brandon Road. In view of large volumes of traffic exchanged between Joliet and the Caterpillar plant, and particularly in view of the anticipated growth of industry in this part of the urban area, it is apparent that additional and more commodius connections should be provided. **Two such connections are recommended.** One would be provided as a southerly extension of Larkin Avenue which would be connected via a grade separated interchange to Channahon Road. The recommended configuration of the connector is a four-lane divided pavement. From the connection to Larkin Avenue at Meadow Avenue, Larkin would be expanded northward to Plainfield Road as a four-lane divided pavement. Details of the recommended configuration for the connector may be found on the strip map at the back of the report.

A second connection would be provided at Brandon Road. Again there would be a grade separated interchange, and extending from it to the north—along the alignment of Raynor Avenue—would be a four-lane divided pavement. An improved connection

DISTRIBUTION OF TRAFFIC
USING U.S. ROUTE 52
- WEST OF JOLIET



at grade would be developed at the Raynor Avenue intersection with McDonough Street. As was brought out previously, McDonough Street would be developed as a major urban thoroughfare between Raynor Avenue and the traffic interchange recommended for development at the McDonough Street intersection with the approach to the proposed new high level bridge. Details of the several elements of this new routing may be found on the reconnaissance plans at the back of the report.

These two new connections will provide adequate service between the existing and anticipated industrial areas and the areas of residence for the coming twenty year period; and further, the latter described route will provide a high-type path for travel across the river to the central area and beyond.

Turning now to the development of Channahon Road, between these two connectors and as it extends externally to the west, the anticipated traffic volumes clearly indicate that it should be developed as a **four-lane divided highway west of Brandon Road to the connection leading to the Caterpillar plant.** Because of the anticipated industrial development along this route, necessitating infrequent but concentrated exchange of traffic, some measure of access limitation might well be applied. This might take the form of local paralleling frontage roads to collect and distribute the traffic exchanged between the route and the fronting developments.

Recommended Treatment of U.S. 52 and Jefferson Street

The Illinois Division of Highways has programmed for development this year the widening of Jefferson Street eastward from the west urban limits to Wilcox Street. It is recommended that this expansion be carried **eastward to Center Street** as promptly as is practicable.

DISTRIBUTION OF TRAFFIC
USING U.S. ROUTE 30
NORTHWEST OF JOLIET

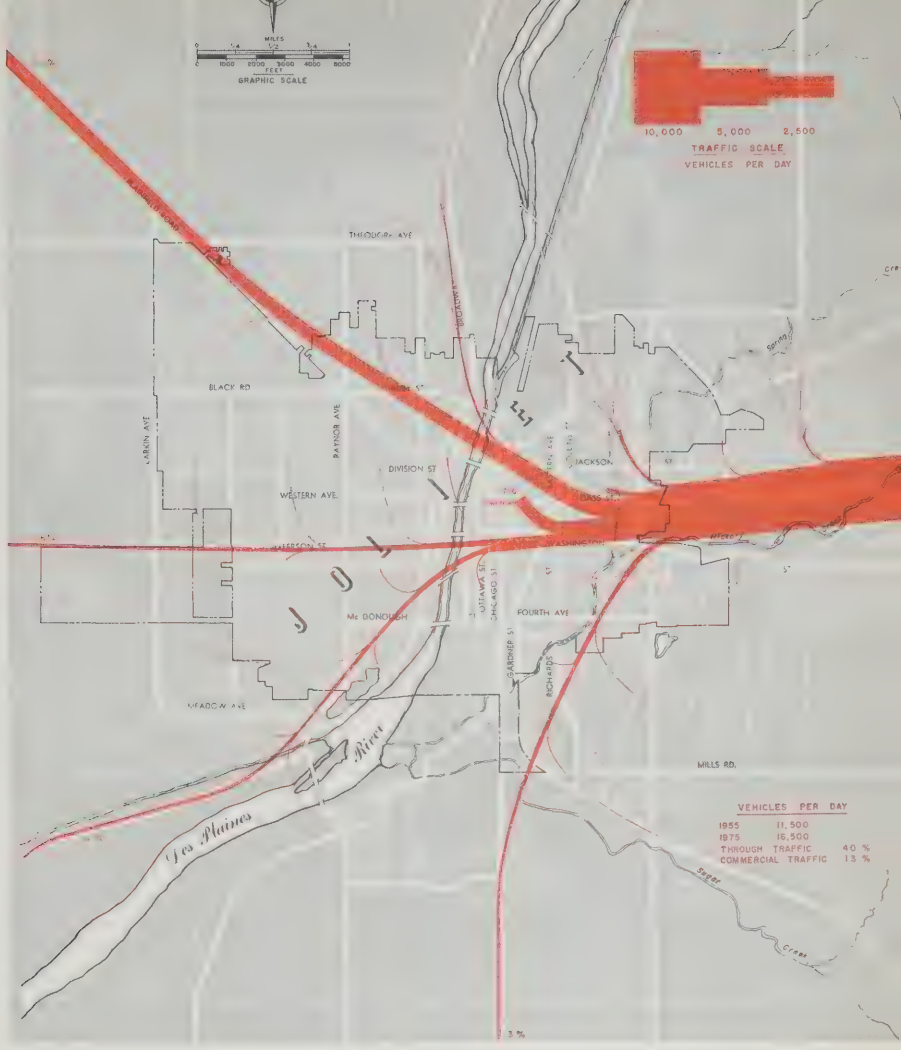
Expansion of U.S. 30 and Plainfield Road

A study of the existing and anticipated origin and destination data shows the clear necessity of a wider pavement for this important artery. The recommendation is that it be given a pavement 40 feet in width from Center Street to the west urban limits and beyond. Center Street should then be similarly expanded southward from Plainfield Avenue to Western Avenue. Because of the heavy volumes which a diagonal routing of this type attracts, **rush hour parking prohibitions should be applied as far northwestward as Raynor Avenue**—and possibly beyond. Consideration has been given to the development of a straightened alignment where Plainfield Avenue and Center Street intersect. However, because of the severe terrain and the high character of the property which would require acquisition, this improvement, while desirable, does not appear to be practical.

Development of Gardner Street

To avoid congestion at the junction of the east approaches to the recommended new bridge and busy Chicago Street, it is necessary that the latter be relieved of as much traffic as is possible. Obviously, downtown terminating movements using Chicago Street can not be diverted, nor can traffic requiring exchange across the river to the west. However, traffic exchanged with the eastern sections of Joliet, and with the external highways on the east side, could be diverted if an adequate and attractive facility for diversion were provided. To serve this purpose, and to lend better service to U.S. Route 52 terminating traffic approaching Joliet from the southeast, it is recommended that Gardner Street be expanded as a major thoroughfare between Doris and 4th Avenues.

DISTRIBUTION OF TRAFFIC
USING U.S. ROUTE 30
EAST OF JOLIET



Doris Avenue would then be expanded and given a smooth connection to Chicago and Gardner Streets. The recommended configurations for these improvements may be found on the reconnaissance plans at the back of the report. These improvements should be timed for development with the recommended additional bridge.

Expansion of Washington Street

Because of its placement in the central sector of eastern Joliet, and particularly because of the lack of adequate north-south connections across the Rock Island and New York Central tracks, this artery carries a major volume of traffic. Considering the great cost involved in developing proper access across the tracks, **and the possible overloading of Cass Street,** should these costly connections be developed, the best plan appears to be that of expanding Washington Street to accommodate the anticipated east-west flow. The recommendation is to widen Washington eastward from Eastern Avenue to the urban limits. The recommended width is 48 feet. In this process, effort should be extended to better the horizontal alignment to the highest degree possible within the existing right-of-way.

Expansion of Cass Street (U.S. Route 30)

This street today is the principal connection for eastern Joliet and the external area beyond, and it will continue this function in the twenty year future. Similar to practically all of Joliet's streets, its right-of-way is inadequate for the development of a high-type carrier. The recommended plan is to widen it eastward from Fairbanks Avenue to the east urban limits at a uniform width of 48 feet and, when traffic increases require it, to prohibit curb parking during rush hours.

Development of Jackson Street and Maple Road (U.S. Route 6)

West of the Elgin, Joliet and Eastern overcrossing, the pavement of this route meets minimum standards for major urban streets. The overpass, however, offers but a two-lane width, and a sharp curve is present at its eastern end. The reconstruction of this routing, including a wider overcrossing, would be highly desirable, but the extreme cost of such an improvement does not appear to be permissible in a realistic program based on foreseeable funds.

Based on numberous observations, the bridge does not appear to cause major delays or create unusual hazard. The recommendation is that it be permitted to remain in use at its present width. Because of this two-lane structure, there appears to be little value in expanding the Maple Road pavement to the east of it, although the anticipated traffic volumes are in the four lane range.

Recommended Major Street and Highway System

The accompanying map shows the major street and highway system recommended to serve traffic needs for the coming twenty year period. The selection has been based on the development of the several projects recommended and described in the foregoing section of the report. Consideration has also been given to the creation of a desirably spaced network of more important carriers, the existence of adequate rights-of-way and pavement widths, and the promotion of the most favorable development of the urban community. However, the most important factor in the selection was the provision of adequate and convenient service to the existing and anticipated movements as derived from the origin and destination data. These data have been applied to the recommended system and the approximate daily traffic volume which would use each element of that system in 1975 has been established. These volumes are graphically portrayed on the diagram.

The Construction Program

In the foregoing sections of this report there have been described the several more important street and highway improvements necessary for the development of a system of major carriers to serve existing and anticipated traffic needs. Some of the betterments are needed at once, others may be deferred a few years and some will not be required before the latter part of the twenty year interval. A review of the major construction projects, as well as those involving pavement widening only, has been made to establish a distinct order of undertaking. The accompanying map shows the location of the recommended projects, and the tabulations which follow **list these in the recommended order of priority.** Two tabulations are set forth—the first listing the **Major Construction Projects** and, the second, those involving **Street Widenings.** The major construction projects should receive the concerted and cooperative efforts of the several road building agencies under a planned program. The timing of the street widening projects is relatively open, and is subject to the condition of the existing pavements and the availability of funds for street improvement. In carrying out these recommended widenings, it may be necessary to divide the more extensive ones into several shorter length projects to adapt them to a realistic financial program. In that event, priority should be given to the lengths which carry the greater estimated traffic volumes. In general, however, priority should be accorded in the order listed.

RECOMMENDED STREET AND HIGHWAY SYSTEM AND ESTIMATED 1957 TRAFFIC VOLUMES

Major Construction Projects

I. Development of One-Way Couples

A. East Couple (Eastern Avenue, Herkimer and Richards Streets)

1. Connect Herkimer and Eastern Avenue to Collins Street near Ward Avenue.
2. Connect Eastern Avenue to Gardner Street at 4th Avenue.
3. Widen Eastern Avenue between end connections at 36-foot minimum.
4. Widen Richards and Herkimer Streets from 5th Avenue to north end connection at 36-foot minimum.

Right-of-Way and Construction . . . . . $ 860,000

B. West Couple (Hickory Street and Broadway)

1. Connect Hickory to Broadway near Ingalls Avenue.
2. Extend Hickory and Broadway south of Marion Street and connect to Center Street near Allen Avenue.
3. Widen Broadway from Ruby Street to Marion Street at 36-foot minimum.
4. Widen Hickory Street from north end connection to Marion Street at 36-foot minimum.

Right-of-Way and Construction . . . . . $ 530,000

II. Additional Bridge and Expressway Connections

Construct new six lane high level bridge and approach connections south of McDonough Street as shown on the reconnaissance plans.

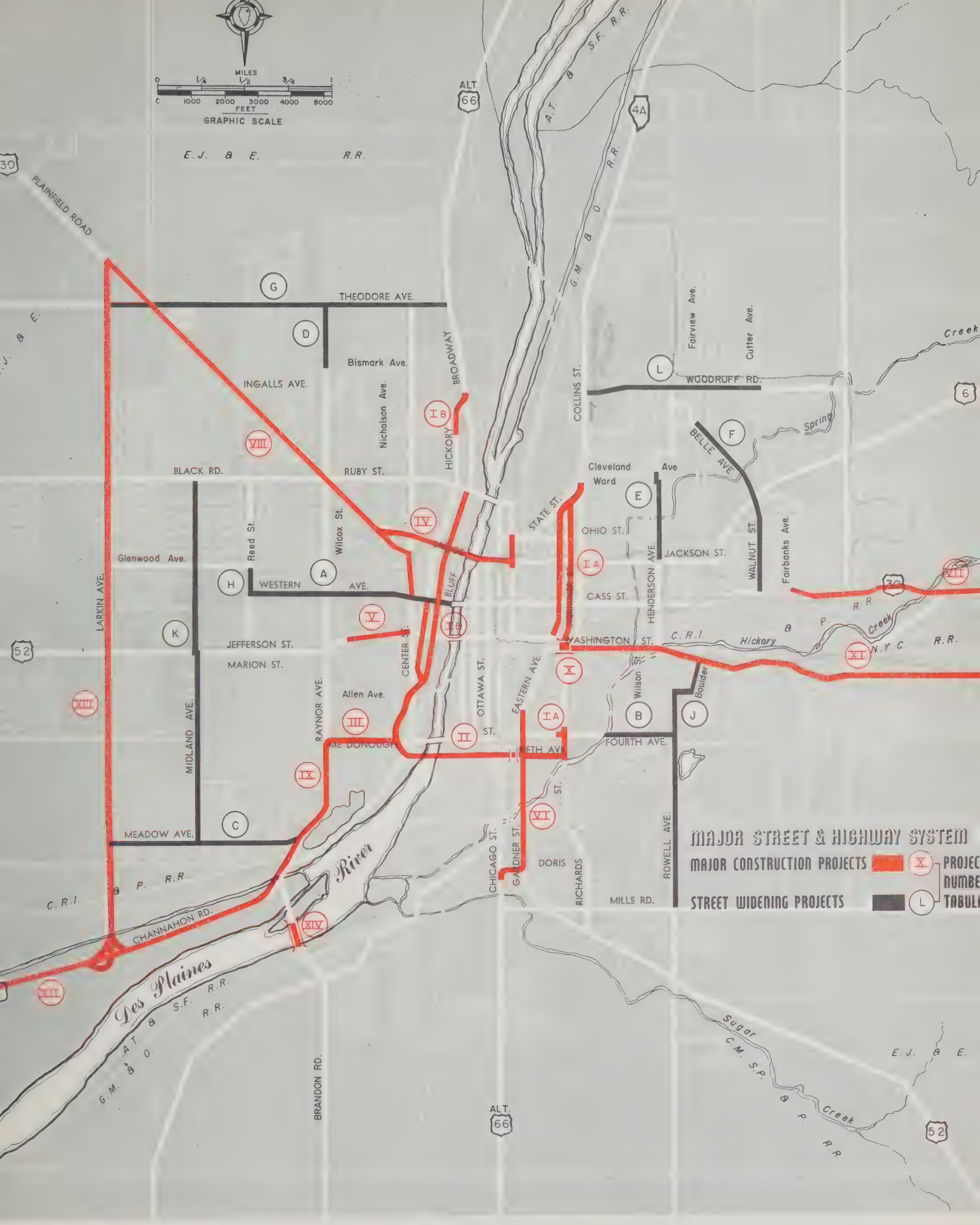
Right-of-Way and Construction . . . . . $ 8,130,000

III. McDonough Street

Redevelop as major urban thoroughfare from Raynor Avenue to the west approach of the recommended additional bridge, including:

A. Four twelve-foot through lanes;
B. Two eight-foot parking lanes;
C. A narrow median divider.

Right-of-Way and Construction . . . . . $ 210,000



RECOMMENDED TWENTY YEAR STREET AND HIGHWAY IMPROVEMENTS

IV. High Level Bridge at Bridge Street

Construct new four-lane high level bridge and approach connections as shown on the reconnaissance plans, including expansion of Bridge Street to Plainfield Avenue.

Right-of-Way and Construction ..... $ 2,860,000

V. West Jefferson Street

Widen from Wilcox Street to Center Street at 48-foot width.

Construction ..... $ 70,000

VI. Doris Avenue and Gardner Street

Develop major urban thoroughfare between Chicago Street and 4th Avenue, including:

A. Four twelve-foot through lanes;
B. Two eight-foot parking lanes (Gardner only);
C. Narrow median divider;
D. Smooth connection to Chicago Street.

Right-of-Way and Construction ..... $ 870,000

VII. Cass Street

Widen from Fairbanks Avenue to east urban limits, 48-foot width.

Construction ..... $ 240,000

VIII. Plainfield Avenue and Center Street

Widen Plainfield Avenue from west urban limits to Center Street. Widen Center Street from Plainfield Avenue to Western Avenue, 48-foot width.

Right-of-Way and Construction ..... $ 650,000

IX. Channahon Road and Raynor Avenue

Redevelop Raynor Avenue as major thoroughfare between McDonough Street and Channahon Road as shown on the reconnaissance plans.

Right-of-Way and Construction ..... $ 1,400,000

X. Richard Street

Reconstruct undercrossing of Rock Island tracks to provide direct alignment, increased vertical clearance, and 40-foot minimum pavement width.

Right-of-Way and Construction	$ 120,000

XI. Washington Street

Widen from Richards Street to east urban limits, 48-foot width.

Construction	$ 510,000

XII. Channahon Road

Expand on existing alignment and grade to four lane divided highway from Brandon Road to Caterpillar entrance. Estimate assumes use of existing pavement as half of recommended roadway.

Construction	$ 210,000

XIII. Larkin Avenue

Develop connection from Meadow Avenue to Channahon Road as shown on the reconnaissance plan. Expand from Meadow Avenue to Plainfield Road as four lane divided thoroughfare on existing alignment and grade.

Right-of-Way and Construction	$ 1,530,000

XIV. Brandon Road

Reconstruct bridge across Des Plaines River at standard two lane width.

Construction	$ 370,000

TOTAL-MAJOR CONSTRUCTION PROGRAM	$18,560,000

Major Street Widenings

Where the existing pavements of the recommended system's streets are thirty-six feet and over in width, it has been assumed that the present width would be adequate until a major overhaul of the street becomes necessary. At that time the width would be brought up to a minimum of forty feet as a part of the rehabilitation of the pavement. The widening of streets having pavements less than thirty-six feet in width have been included in the recommended program. The estimates of cost are based on resurfacing

and widening. It is to be recognized that at the time of undertaking these projects the condition of the pavements may be such that partial or complete repaving may be necessary. The streets and the suggested priority of undertaking follow.

PROJECT No.	FROM	TO	ESTIMATED COST
A. Western Ave.	Reed St.	Bridge	$ 160,000
B. 4th Avenue	Hickory Creek	Rowell Ave.	$ 60,000
C. Meadow Ave.	Larkin Ave.	Raynor Ave.	$ 160,000
D. Raynor Ave.	Bismark Ave.	Theodore St.	$ 70,000
E. Henderson Ave.	Jackson St.	Cleveland Ave.	$ 80,000
F. Belle Ave. and Walnut St.	Fairview Ave.	Cass St.	$ 190,000
G. Theodore St.	Broadway	Larkin Ave.	$ 310,000
H. Reed St.	Western Ave.	Glenwood Ave.	$ 30,000
J. Rowell and Boulder Aves.	Mills Rd.	Washington St.	$ 260,000
K. Midland Ave.	Meadow Ave.	Black Rd.	$ 350,000
L. Woodruff Rd.	Collins St.	Cutter Ave.	$ 160,000
TOTAL—MAJOR STREET WIDENINGS			$ 1,830,000
GRAND TOTAL—TWENTY YEAR IMPROVEMENT PROGRAM			$20,390,000

Carrying Out the Plan

As a part of the plan presented herein, consideration has been given to the problem of financing the necessary improvements, and to the degree of responsibility which might logically be assumed by the principal urban highway development agencies, the City, the County and the State.

In the case of the designated State Highways on the approaches to Joliet, it is only logical that the development of improvements to these be **the responsibility of the State.** Upon the entry of these routes into the corporate area, however, the financing of improvements should logically be shared by the State and the Municipality.

The remainder of the projects within the city, those not on the system of designated routes, will carry a very high proportion of internally generated traffic and should, therefore, become the **responsibility of the City.** The cost of the recommended improvements is well beyond current applications of funds for street improvement purposes. The returns from the new city sales tax which, it is understood, will be applied principally to street improvement, will surely help the City in carrying forward its share of the plan. In the case of the several railroad grade separations, some equitable arrangement might be worked out between the municipality and the railroads.

Marking of State and U.S. Routes

Following the development of a system of streets and highways to meet Joliet's twenty year major traffic needs, and the recommendation of a program for the satisfaction of those needs, a study was made of a logical pattern of State and Federal route markings for application to the improved system. The recommended system of route markings is shown on the accompanying map and is described below. Prime significance has been placed on the service of the external traffic movements in accordance with the

RECOMMENDED STATE AND FEDERAL HIGHWAY ROUTINGS

surveyed origin and destination characteristics, **with particular emphasis upon shortening the travel time of through trips.** It was also considered essential to, where possible, locate the marked routes **near, but not within,** the central business district so as to permit easy access to that area for downtown destined traffic and yet directing other traffic movements from that busy zone. Care was also taken to establish the recommended routings on the more capable elements of the system, and to avoid, where possible, the introduction of through traffic into residential neighborhoods.

U.S. Route 66 (Alternate)

Beginning at the north, this designation would enter Joliet via Broadway as it does today. Instead of crossing the river at Ruby Street it would continue southward via the west couple (Hickory and Broadway) and then would cross the river over the recommended new high level bridge south of McDonough Street. It would then be routed through the interchange to Chicago Street and then southward on that artery out of Joliet as it is routed today.

U.S. Route 6

Beginning at the northeast, this routing would enter Joliet via Maple Road and Jackson Street as it now does. Instead of turning southward into Collins Street it would be routed in that direction via the east couple (Eastern Avenue and Herkimer and Richards Streets) to 5th Avenue, where it would make directional connections to the expressway

approach of the recommended new high level bridge. The route would cross the river via this bridge, pass through the interchange and proceed westward via McDonough Street to Raynor Avenue. It would follow redeveloped Raynor southward, make junction with Channahon Road and proceed westward beyond the urban limits via that carrier.

U.S. Route 30

Beginning at the northwest, this routing would continue to enter the city via Plainfield Road. Instead of continuing on Plainfield and passing through the heart of the business center, it would follow Ruby Street across the river. The eastbound movement would be routed southward on Chicago Street, eastward on Clay Street and then southward to Jackson Street via Scott Street. The westbound movement would approach Ruby Street via Scott and Columbia Streets. The routing would be carried to the east via the north couple (Ohio and Jackson Streets) and then southward to Cass Street via the east couple (Eastern Avenue and Herkimer Street). The routing would then follow Cass Street eastward beyond the urban limits as it does today.

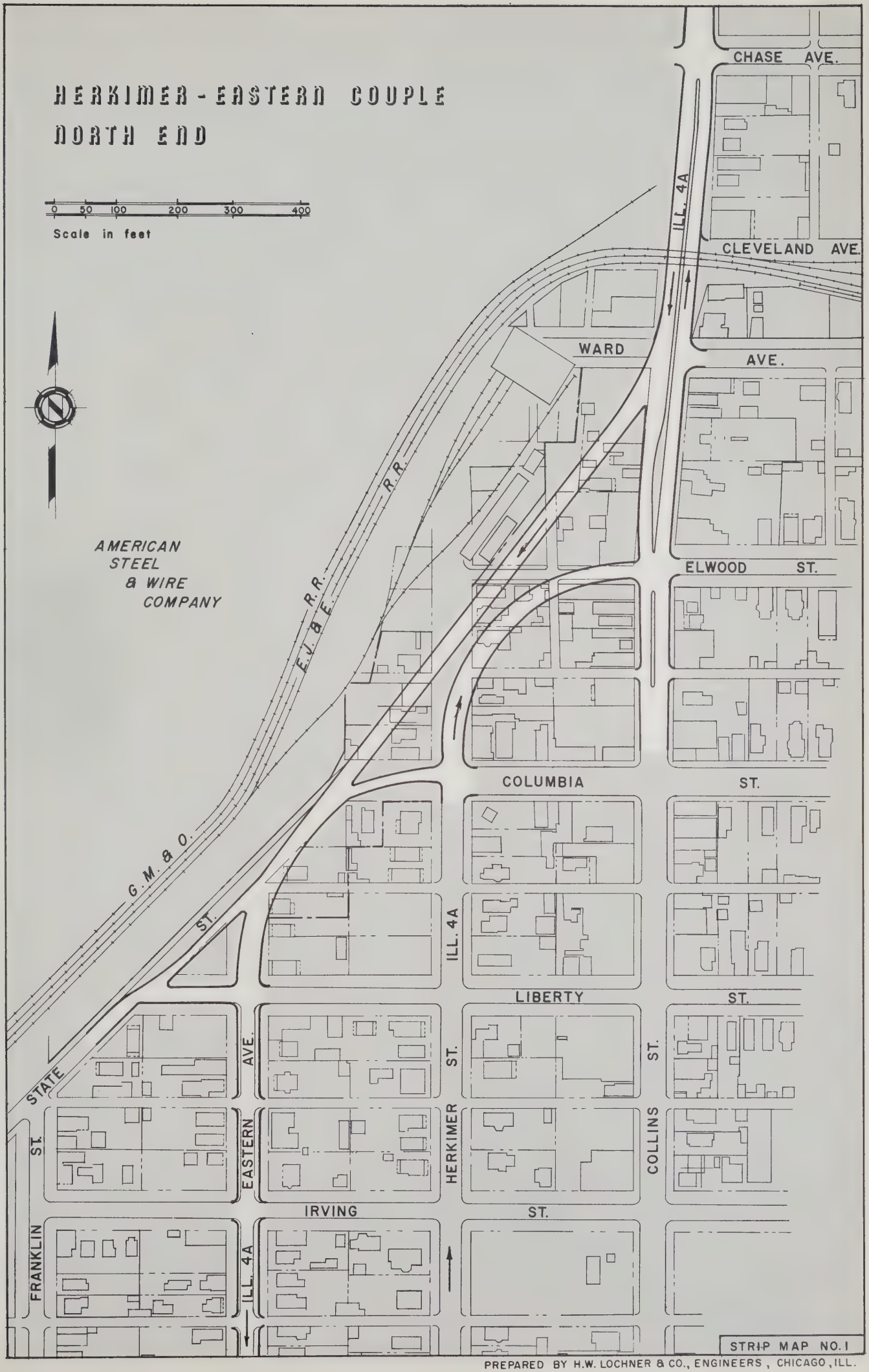
U.S. Route 52

This marking would enter Joliet from the west via Jefferson Street as it does today. Instead of continuing into the business district it would turn south at Raynor Avenue and then eastward along McDonough Street. It would pass through the McDonough Street interchange, cross the river via the recommended high level bridge and interchange into Chicago Street. It would then follow Chicago Street, Doris Avenue and Manhattan Road to the south and east as it does today.

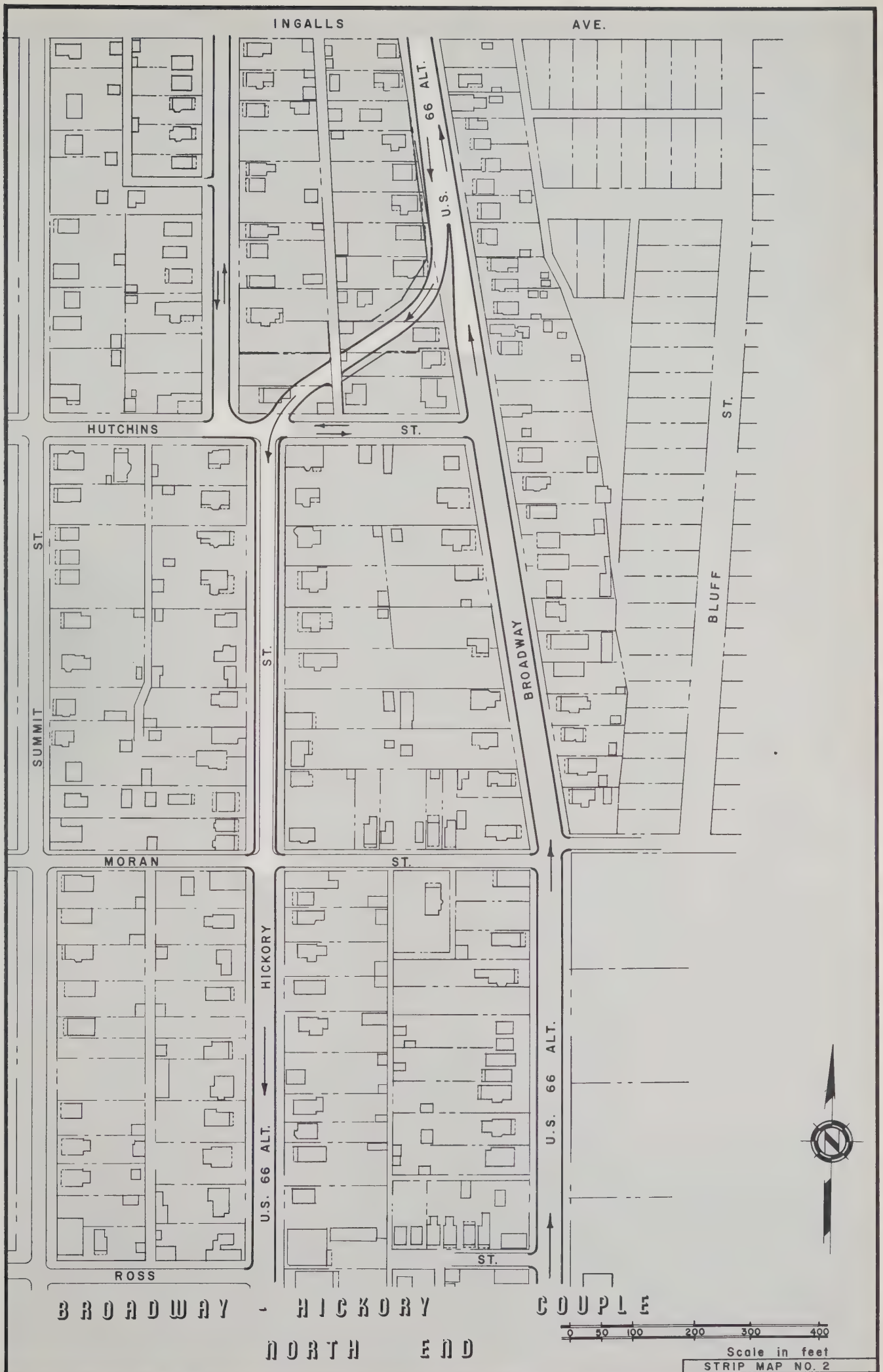
Illinois Route 4A

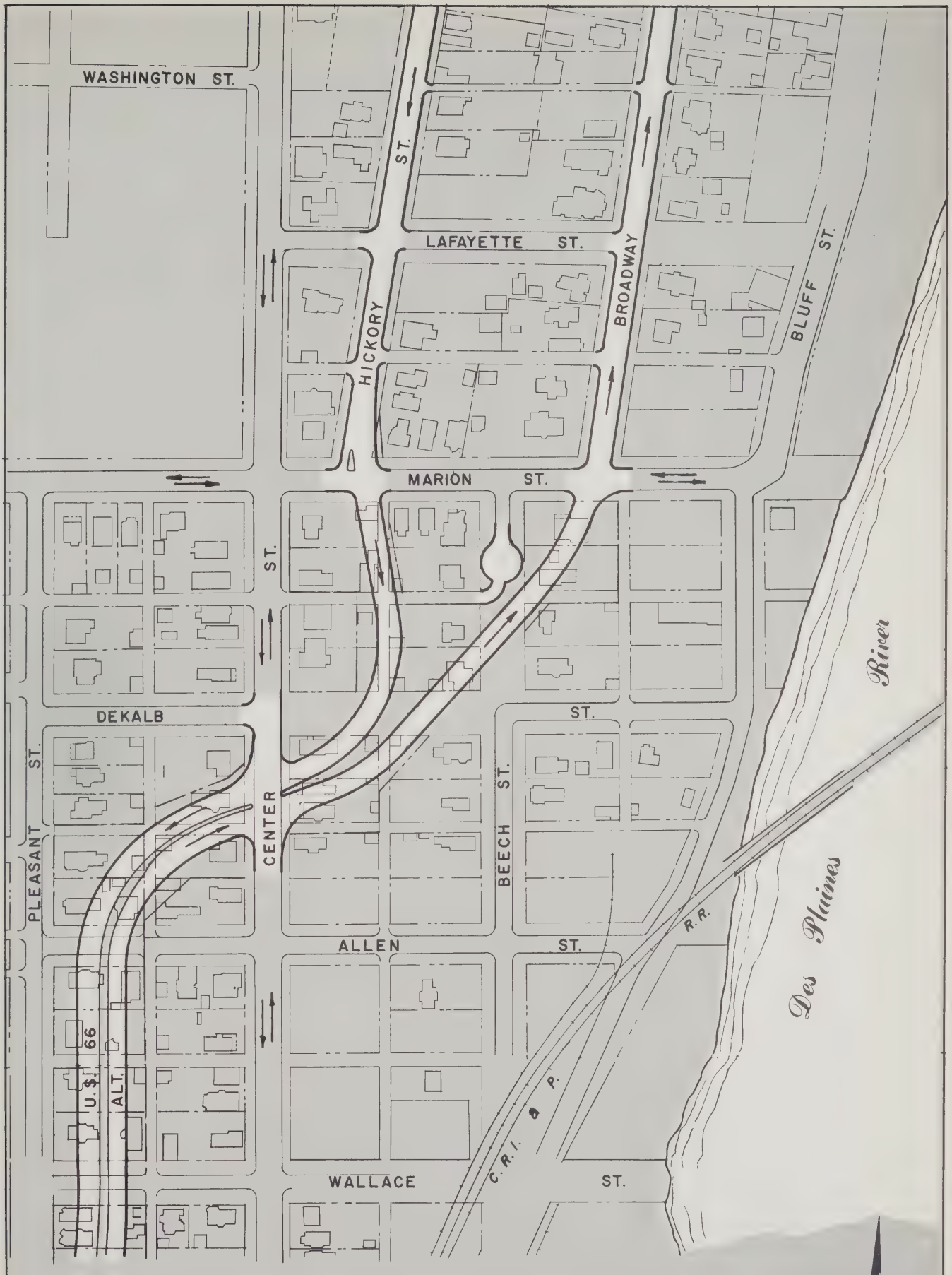
Beginning at the north, this designation would enter the city, as it does today, via Collins Street. At its junction with the east couple (Eastern Avenue and Herkimer and Richards Streets) it would leave Collins and follow the couple southward to 5th Avenue. It would then follow 5th Avenue and Gardner Street to Doris Avenue where it would turn to the west and terminate, as it now does, at Chicago Street.

KEY MAP FOR RECONNAISSANCE PLANS



PREPARED BY H.W. LOCHNER & CO., ENGINEERS, CHICAGO, ILL.


INGALLS
AVE.
66 ALT.
U.S.
HUTCHINS
ST.
ST.
BLUFF
ST.
SUMMIT
ST.
BROADWAY
MORAN
ST.
HICKORY
U.S. 66 ALT.
U.S. 66 ALT.
ROSS
ST.
BROADWAY - HICKORY COUPLE
NORTH END
0 50 100 200 300 400
Scale in feet
STRIP MAP NO. 2
PREPARED BY H.W. LOCHNER & CO., ENGINEERS, CHICAGO, ILL.



BROADWAY - HICKORY COUPLE
SOUTH END

0 50 100 200 300 400
Scale in feet

STRIP MAP NO. 3

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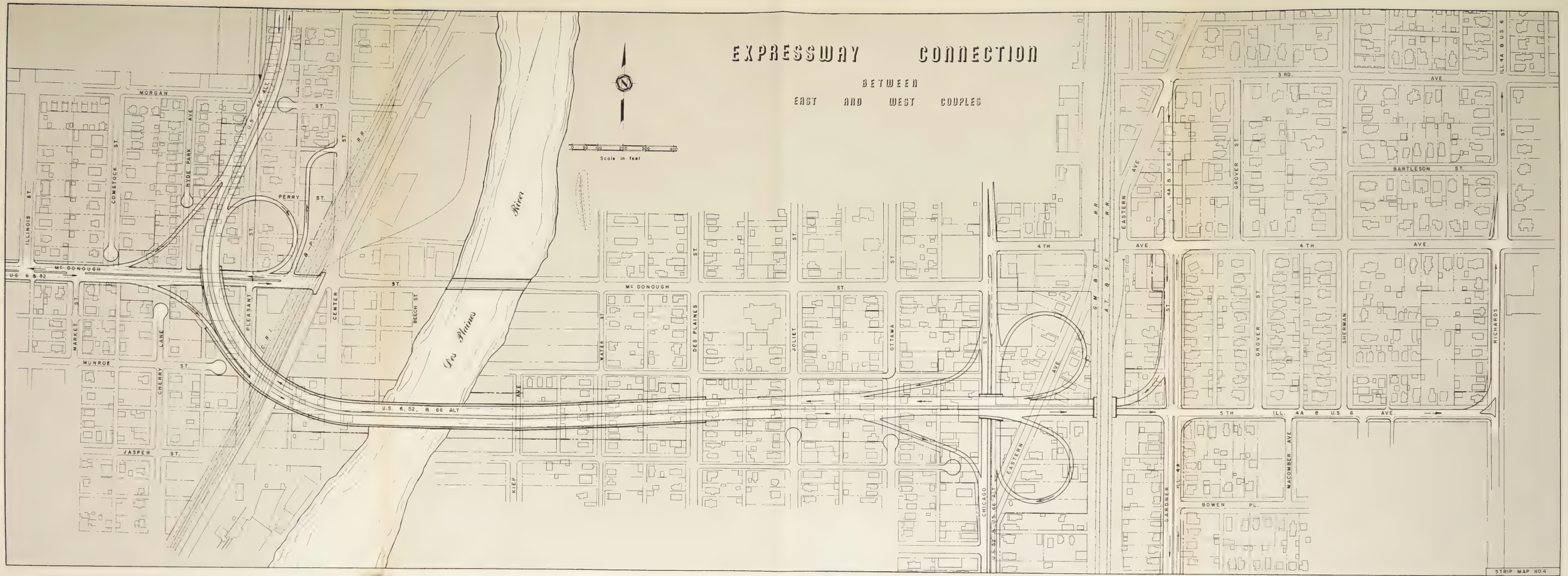
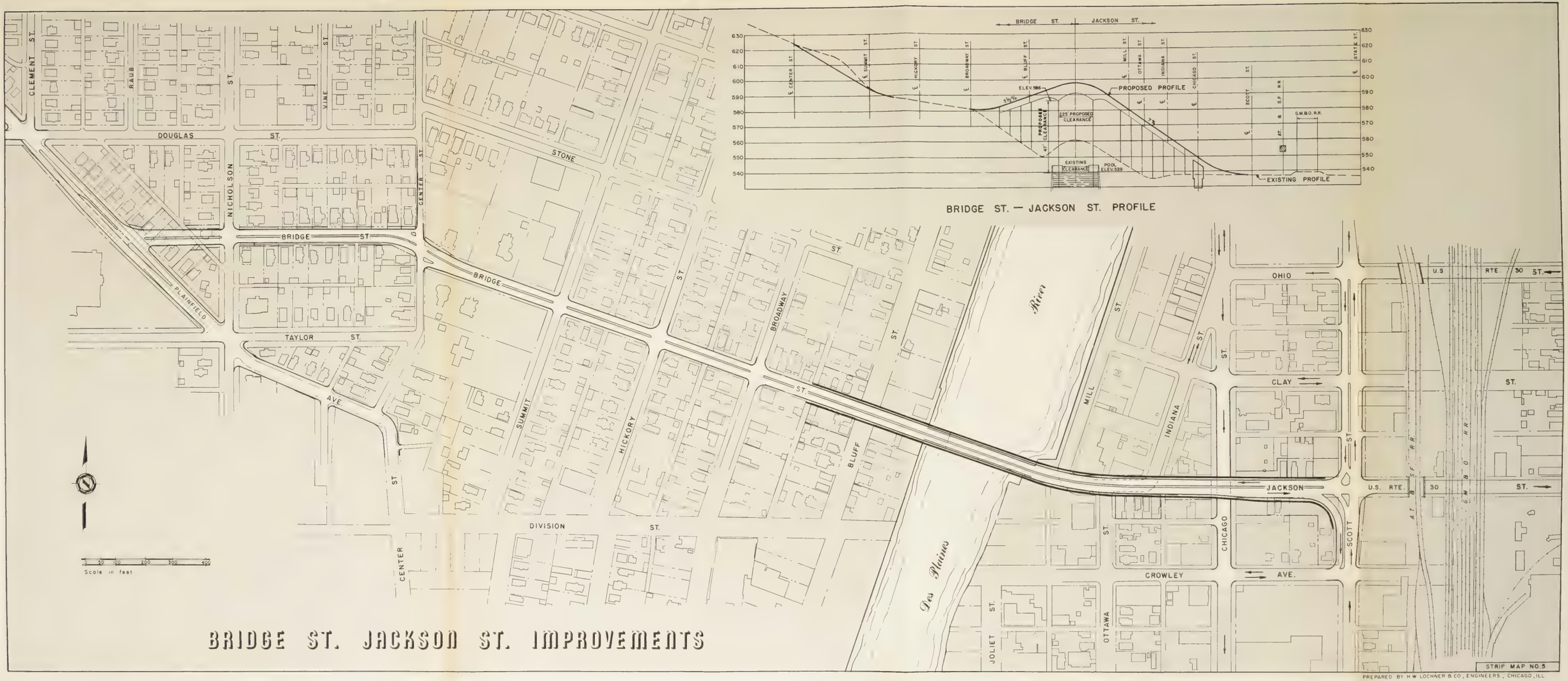
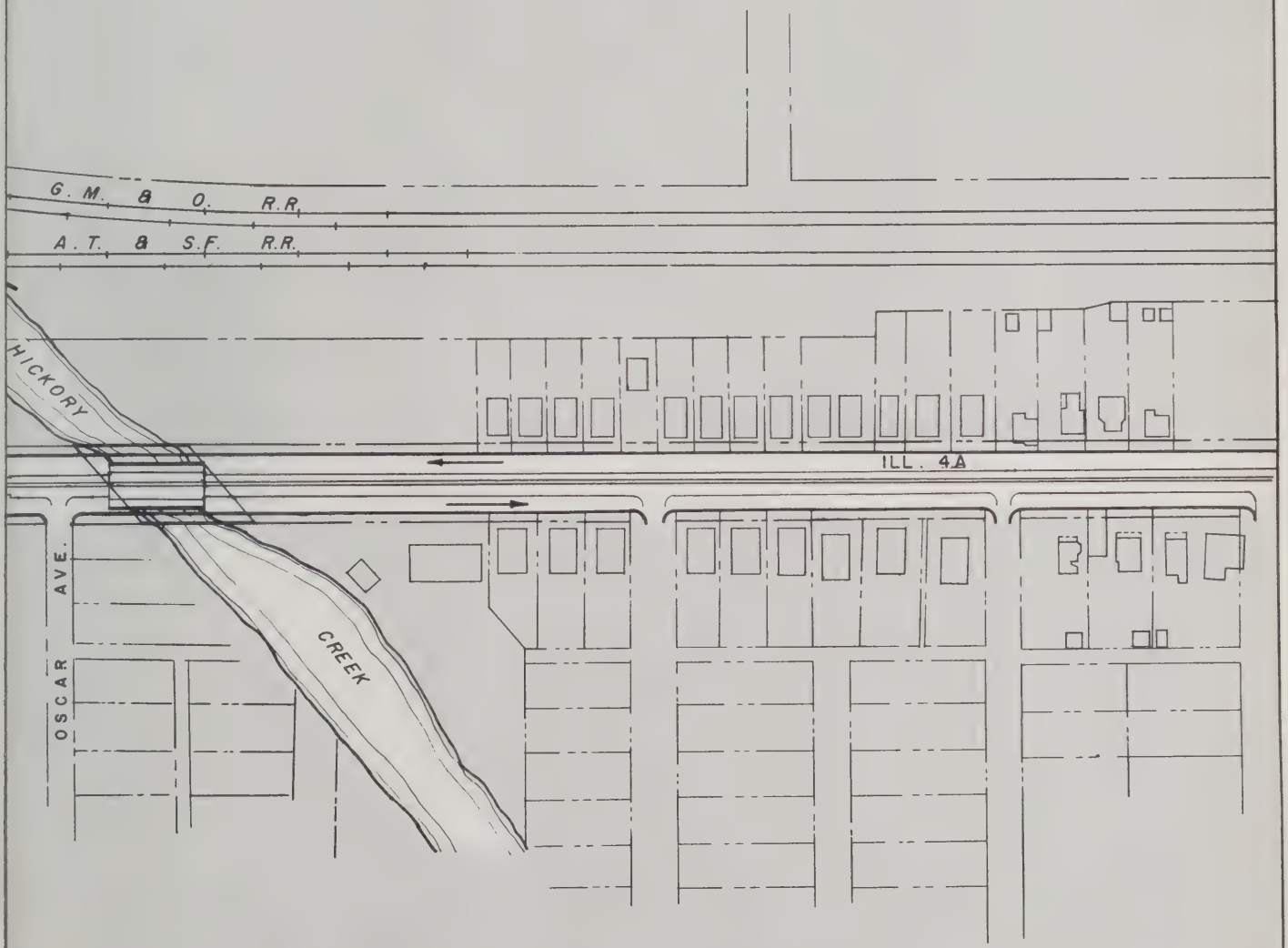

EXPRESSWAY CONNECTION
BETWEEN
EAST AND WEST COUPLES
Scale in feet
0 50 100 200 300 400
N
Des Plaines River
MORGAN ST.
ILLINOIS ST.
COMSTOCK ST.
HYDE PARK AVE.
PERRY ST.
MC DONOUGH
U.S. 6 & 52
MARKET ST.
LANE
CHERRY
MUNROE ST.
JASPER ST.
PLEASANT ST.
CENTER
BEECH ST.
WATER ST.
DES PLAINES
JOLIET
OTTAWA
KIEP AVE.
CHICAGO
U.S. 52 & U.S. 66 ALT.
EASTERN AVE.
4TH AVE.
G.M. & O. R.R.
A.T. & S.F. R.R.
C.R.I. & P. R.R.
U.S. 66 ALT.
U.S. 6, 52, & 66 ALT
3RD. AVE.
GROVER ST.
BARTLESON ST.
ILL. 4A & U.S. 6
5TH AVE.
SHERMAN
RICHARDS
GARDNER
ILL. 43
MACOMBER AVE.
BOWEN PL.
STRIP MAP NO. 4
PREPARED BY H.W. LOCHNER & CO., ENGINEERS, CHICAGO, ILL.

BRIDGE ST. — JACKSON ST. PROFI


BRIDGE ST. — JACKSON ST. PROFILE
BRIDGE ST.
JACKSON ST.
PROPOSED PROFILE
EXISTING PROFILE
ELEV. 586
225 PROPOSED CLEARANCE
EXISTING CLEARANCE
POOL ELEV. 539
CLEMENT ST.
RAUB ST.
VINE ST.
DOUGLAS ST.
NICHOLSON ST.
CENTER ST.
STONE ST.
BRIDGE ST.
PLAINFIELD AVE.
TAYLOR ST.
SUMMIT ST.
HICKORY ST.
BROADWAY ST.
BLUFF ST.
DIVISION ST.
MILL ST.
INDIANA ST.
OHIO ST.
CLAY ST.
JACKSON ST.
CROWLEY AVE.
CHICAGO ST.
SCOTT ST.
JOLIET ST.
OTTAWA ST.
U.S. RTE. 30 ST.
AT & SF RR
GMBO RR
River
Des Plaines
Scale in feet
BRIDGE ST. JACKSON ST. IMPROVEMENTS
STRIP MAP NO. 5
PREPARED BY H.W. LOCHNER & CO., ENGINEERS, CHICAGO, ILL.



STREET DEVELOPMENT

NUE CONNECTION TO CHICAGO STREET

STRIP MAP NO. 6

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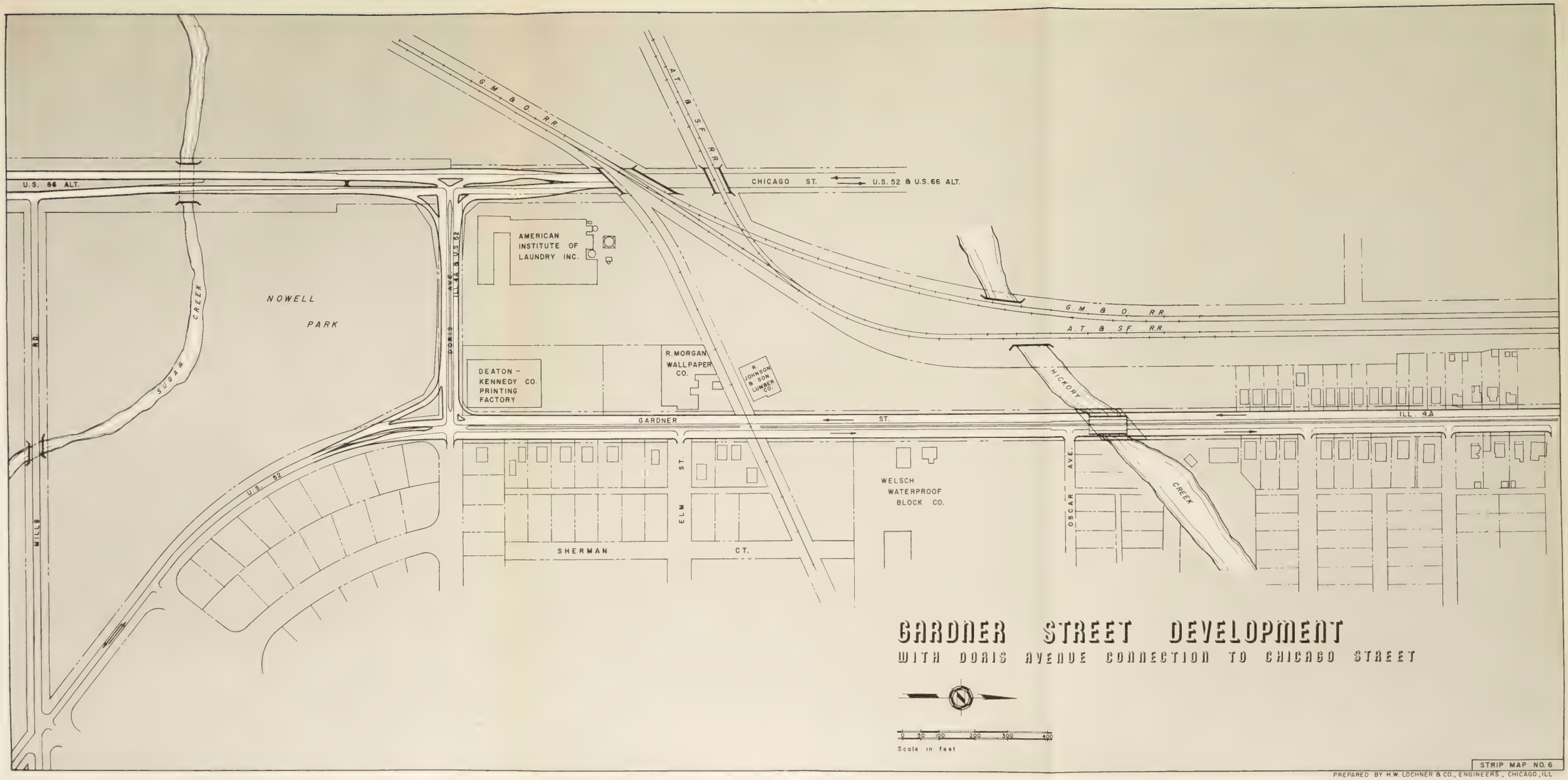

GARDNER STREET DEVELOPMENT

WITH DORIS AVENUE CONNECTION TO CHICAGO STREET

STRIP MAP NO. 6

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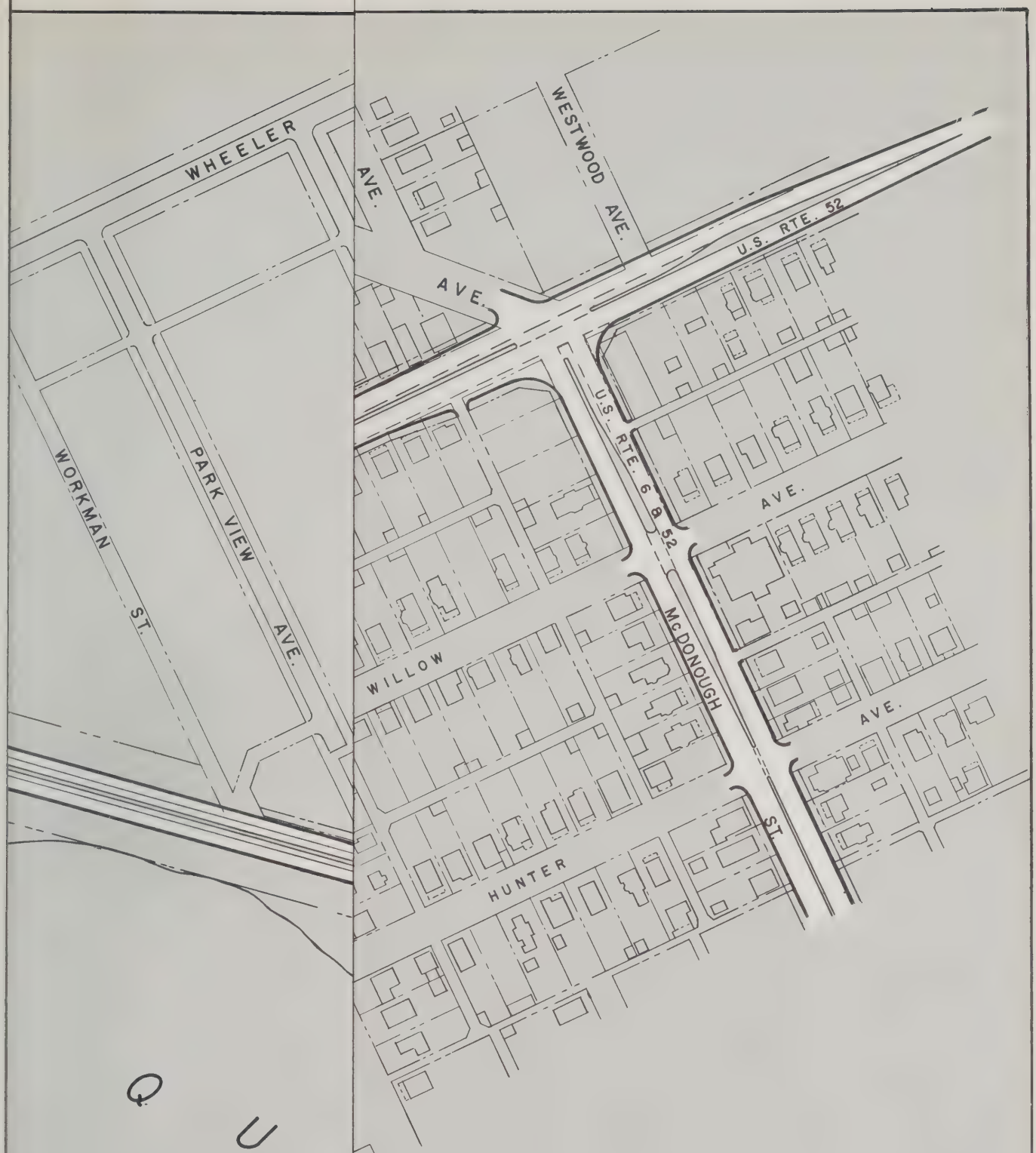

CHANNAHON RD.

STRIP MAP NO.7

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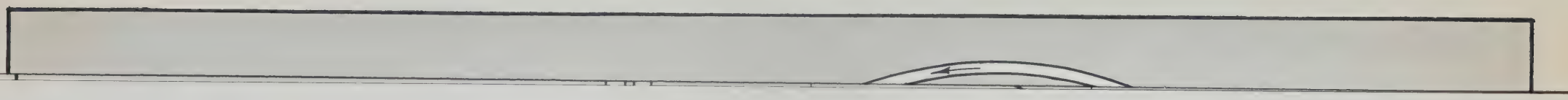
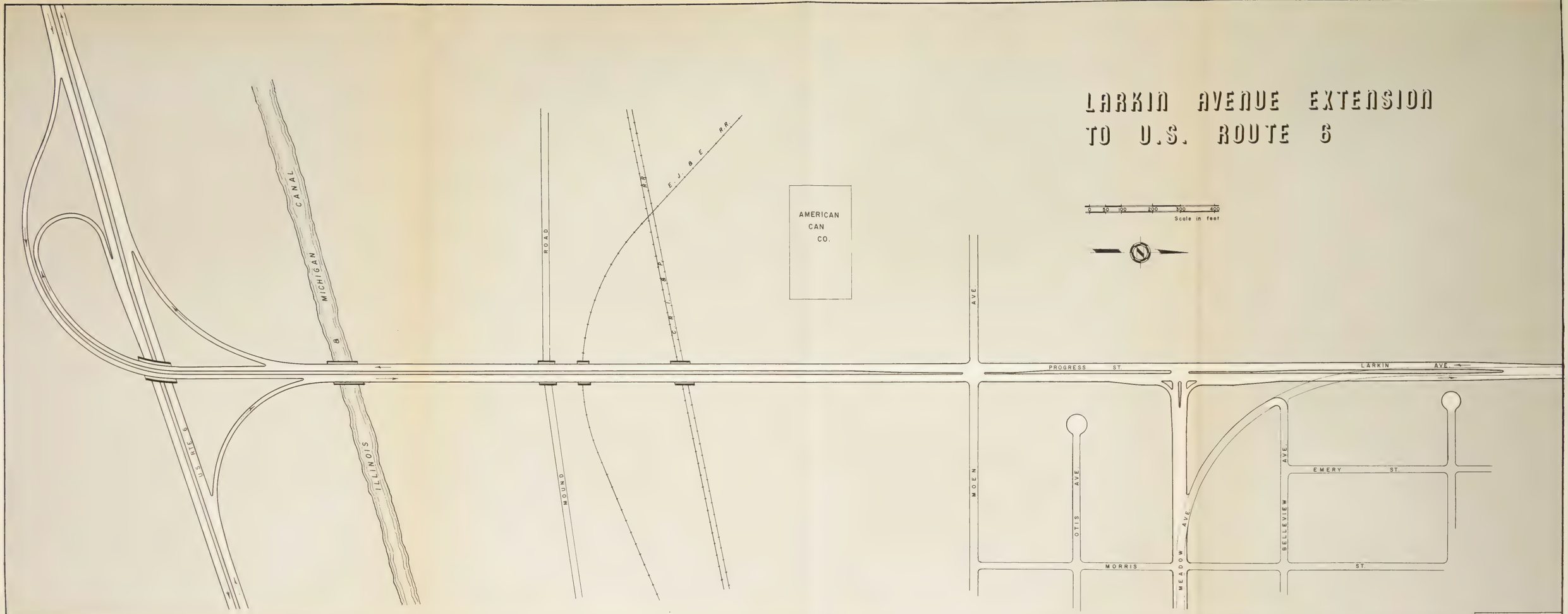
CHANNAHON RD
ILLINOIS & MICHIGAN CANAL
RD
BRANDON
MOEN AVE
RD
THORNE ST
MERIDEN AVE
WHEELER AVE
WOODS
CREIGHAN
IDA
ST
WORKMAN ST
PARK VIEW AVE
ST
AVE
KAMMERMAN
AVE
COCHRANE
AVE
GLENWOOD PL
PROSPECT PL
WEST
PARK
JASPER
FISK AVE
WESTWOOD AVE
AVE
US RTE 52
US RTE 6
RAYNOR
ST
US RTE 6
MERIDEN
ST
AVE
WILLOW
AVE
LUCAS
ST
SHELBY
ST
JASPER
ST
HUNTER
ST
1ST
ST
ROCK
US RTE 6
C. R. I. & P. RR.
RAILROAD ST
QUARRY
Des Plaines
River
Scale in feet
RAYNOR AVE. - CHANNAHON RD.
CONNECTION
STRIP MAP NO.7
PREPARED BY H.W. LOCHNER & CO., ENGINEERS, CHICAGO, ILL.



LARKIN AVENUE EXTENSION TO U.S. ROUTE 6



STRIP MAP NO. 8

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